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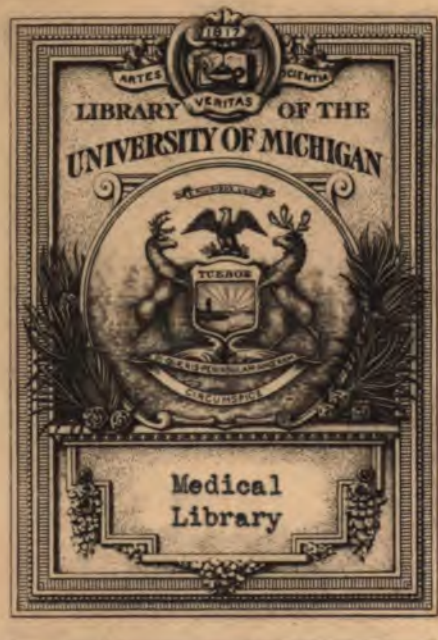

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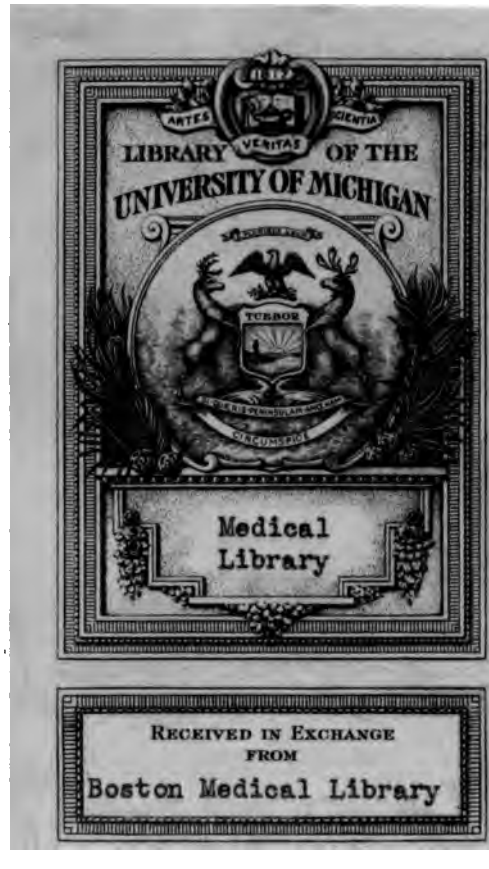
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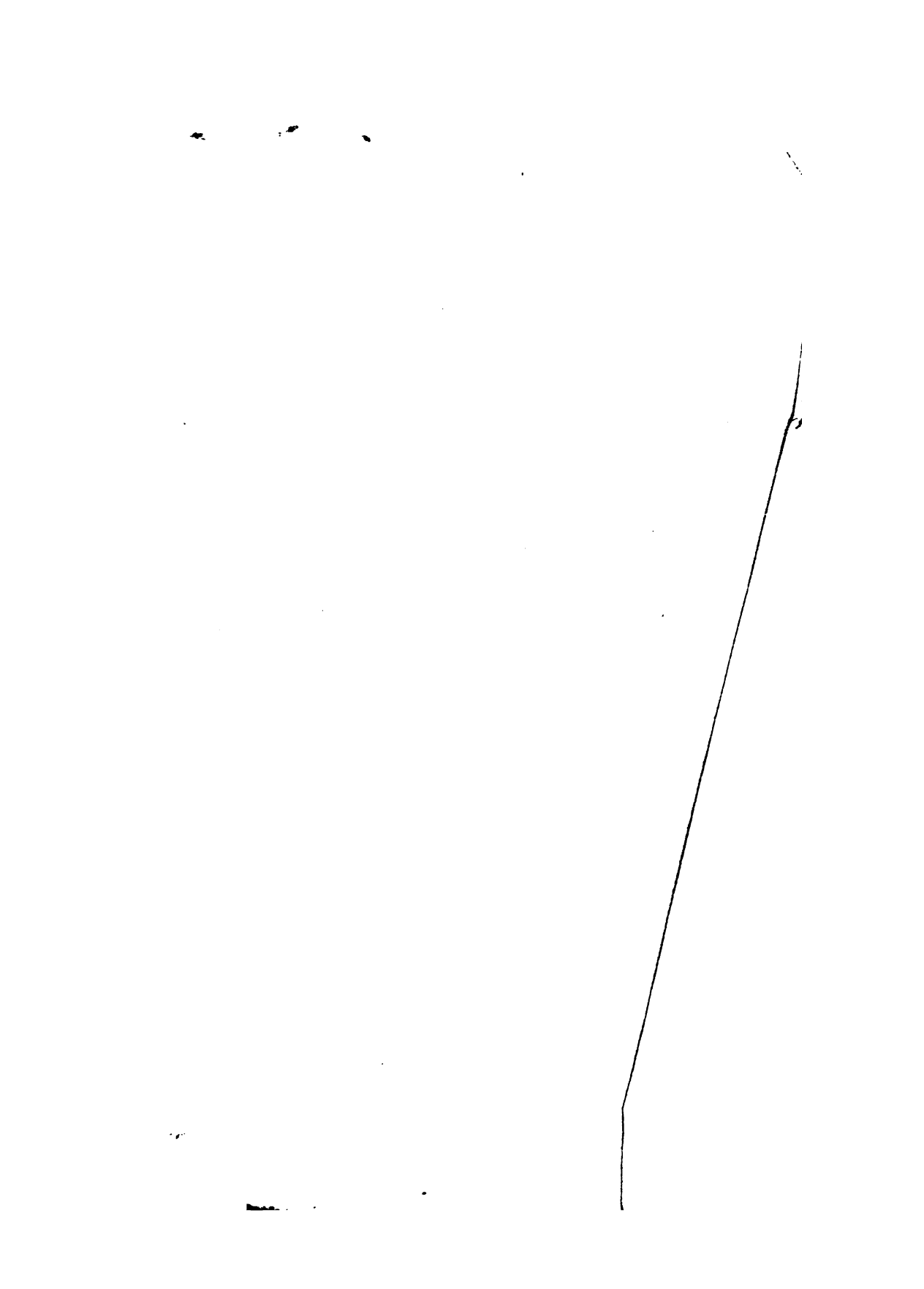

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INTRODUCTORY.

It has been truly observed that the literature of medicine is so vast that there is probably no intellect equally acquainted with all its departments. The attempt, even cursorily, to read all that is daily published on the subject, much less to comprehend what has been already written, would be as futile as the endeavour to number the particles of which the mass of the earth is composed. Yet many branches of this subject are practical, and notwithstanding their extent and difficulty there are men whom duty requires to have such a knowledge of them as they can use readily every day of their lives, together with an acquaintance with all new sources of information which throw light upon them. Hence the necessity for reviews and periodical publications in literature and science.

At the present day this mode of circulating knowledge appears, like Aaron's rod, to be swallowing up all others; and although the multiplicity of medical periodicals brings into the market a prodigious glut of unprofitable wares, yet an eclectic journal which carefully gleans the wheat from the chaff, may derive from this source, and present to the profession, a concentrated mass of information, which the general body of practitioners cannot possibly reach through any other channel.

It is with this object that the Editors of this Journal appear to-day; laying claim to no other merit than that of industry, common sense, and good intentions; satisfied that for these humble attributes there is ample scope for exertion, and perhaps some reward in store; directing their strength to the selection and concentration of what really tends to the advancement of science, or may prove useful in the daily walks of practice.

But there is another field in which we venture to hope that our enterprise may do some good. Confessedly there are many reforms needed a*mong us before physicians* can regain the position they once

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held, when Rousseau said of them, "in every country they are the men most truly useful and learned," and the celebrated philologist, Dr. Parr, remarked that "in erudition and science, in habits of deep and comprehensive thinking, pre-eminence must be assigned to physicians over all other professional men." The subject of medical education calls loudly for attention; the public will not accord the profession the confidence it should merit, until they have some surer guarantee of the qualification of the host of young physicians, annually created by our medical schools. The necessity for local organization; for a general code of ethics; for the repeal of the unjust laws which require of medical men, under heavy penalties, precise anatomical knowledge, and deny them the only means of obtaining it; the duties of physicians before the tribunals of the country, and the necessity for the appointment of medical men to the office of coroner, are matters deserving grave consideration. In these and in all other questions involving the welfare of the profession, the editors of this journal will ever appear as supporters of the dignity and interests of the medical body, and as opponents of abuses and their unprincipled abettors.

But it is not alone by advocating their just rights, or by offering them stores gathered from the affluence of the old world, that we hope to merit the support and co-operation of the profession of Virginia. We offer them an opportunity of exhibiting proofs of their observation and experience in the great field of disease; of showing that the talent confided to their charge has not been allowed to lie dormant and unimproved; that it still bears fruit even far from those centres which nourish it;* of presenting the results of their devotion to the common duty and labour of us all—the advancement of human knowledge and the relief of human distress.

Surely we are not deceived in our faith in the opulence of our resources. Surely the observation of more than 3000 Virginia physicians must accumulate a rich mass of experience.

The physicians of the old world labour very hard, and, upon the whole, very profitably. But their labour is bestowed in unequal de-

* "Le talent ne reste pas sterile même loin des centres qui l'aliment. VIDAL *(de Cassis) Medicine operatoire.*

grees. Pathology and Diagnosis have had much more of their regard than treatment, and therefore while their knowledge of morbid processes has become more exact and surer, their ability to influence the progress of disease has not increased proportionably. Now therapeutics is the complement and perfection of medicine. Suppress it and medicine is a purely descriptive science, a dry branch of natural history, a subject interesting only to the naturalist. Create therapeutics, and suddenly medicine appears in all its plenitude, grand and majestical, the most sublime of all human sciences, if indeed its origin is not divine.*

Here then is a field in which the deepest human sagacity has been and may be exercised, for which the profession at the south are pre-eminently qualified.

These then are the objects for which this journal was established, and to attain which we invite the co-operation of all honest and worthy men. Ours is a catholic work, the organ of no sect or party; its interests are those of the whole profession; it owes allegiance or obligation to none. With the inflexible resolution to preserve this character we look to the future with sure faith, and even with the long and dreary history of medical journals before our eyes, we cannot believe that we propose another "twelve months voyage to obscurity and the chaos of failures."

* Debreyne. *Maladies Chroniques.*

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL

FOR APRIL 1853.

ART. I.—*The Prophylaxis of Traumatic Inflammation.* By JOHN P. METTAUER, M. D., LL. D., Professor of Surgery in Randolph Macon College, Virginia.

The most skilfully executed operation will now and then be defeated in its curative or reparative designs by traumatic inflammation and its consequences; it may even greatly endanger life itself; and by reason of the hazard thus involved, many justifiable attempts to relieve human suffering and infirmities have been discouraged. It is traumatic inflammation that so often disappoints the hopes of the surgeon in his plastico-reparative operations, by preventing or disturbing the adhesive process, or by inducing suppuration, ulceration or sloughing. It is traumatic inflammation that renders the Cæsarian section abortive, and causes the fatal termination of so many operations involving the great cavities of the body. And besides seriously endangering life, and the results of operations, traumatic inflammation essentially augments the suffering of the patients, as well as protracts the cures.

That undue degrees of inflammation impair the adhesive, modelling and growth-healing processes, is conceded by surgeons at the present day; and it is equally well established, that the less a wound inflames the more perfectly and speedily it heals. Indeed there is abundant proof that adhesion and its kindred processes are the product of exaltation of the vital actions of a wounded part, closely verging on inflammation, but never assuming that condition without parting with its true reparative qualities. *The adhesive* process differs essentially from *that instituted by the reparative* forces of the living body in the resto-

ration of lost parts. In this latter process, or union by the second intention, inflammation is an inseparable element. Without inflammation in certain degrees, suppuration could not take place, and without it, granulations would never make their appearance to effectuate union. Suppuration always precedes as well as attends upon the granulating of denuded surfaces, and exerts a protecting influence upon the granulations themselves; but if the attendant inflammation, as already intimated, assumes characters of undue activity and violence during the progress of these processes, it never fails to deteriorate them proportionally. Adhesion, or union by the first intention, modelling and growth-healing, are, then, to be regarded as reparative processes, based in exalted vital action of the living structures directly involved, closely bordering on inflammation, but never assuming that condition; while union by the second intention requires that state as a necessary prerequisite and concomitant, but in moderate degrees.

It is generally believed by the profession that adhesion, modelling and growth-healing, owe their reparative agencies chiefly to fibrin, slowly deposited upon the surfaces of wounds, after their formation, and nearly simultaneously becoming coagulated, and originating the new living structure that is to become the bond of union. In this process it is all important that very moderate quantities of fibrin should be deposited at a time, and that it should not be materially altered in its qualities from fibrin as it exists in healthy blood. The same will be necessary in the healing of wounds by growth. In this, too, the reparation is accomplished by the gradual deposition and organization of fibrin, until the chasm is filled up, without inflammation attending in any exalted degree.

From the views thus briefly presented, it will be seen that the several processes taking place in the living solids for the purpose of healing wounds, differ essentially; that is, adhesion and its kindred agencies, constituting the true adhesive processes, are characterized by the absence of appreciable inflammation, and by the deposition and organization of fibrin, which is to become the living bond of union; while union by the second intention consists in moderate degrees of the inflammatory process, suppuration, granulation and cicatrization. The presence of inflammation invariably interrupts the first, and partially or completely converts it into the second; in the latter, its coexistence is indispensable; yet, if it occur in undue degrees of activity, and persist too long, the process as certainly proves abortive from the non-appearance or destruction of healthy granulations.

It should be the aim of all surgical operations first to afford relief *with as little pain as possible;* and next, to be so executed as to secure

the most speedy and perfect cures. To accomplish the first design, the surgeon must exercise his best and most deliberate judgment in deciding upon the curability of his cases, and the practicability of an operation, and when an operation is undertaken, he may disarm it of pain by the use of anæsthetic agents, and by avoiding roughness and tardiness in its performance.

The second object may be attained in a very great degree by the method of operating, but yet more by the management of the *post traumatic stage;* and as this paper is designed chiefly to elucidate the treatment of that period, our attention will next be directed to its consideration. Very early after an operation, nay, it is probable from its commencement, secretion is more or less disturbed by the shock experienced throughout the nervous system; and coextensively innervation, secretion, absorption and nutrition, suffer impairment. It is chiefly the structures, however, that are by near proximity involved, that experience such disturbance in the greatest degree. We are unable, in the present state of our knowledge, to explain their exact condition, but we know that they are the parts most predisposed to inflammation. The feeble pulse and pallid cool skin clearly indicate want of vital action, both nervous and vascular; and such a state, it would seem, must be chiefly based in or connected with capillary inaction as one of the earliest pathological changes caused by traumatic shock. Capillary disturbances, however, are not the first link in the predisposing causation of traumatic inflammations. It is to the nervous system that we are to look for it; and perverted innervation, more particularly as it relates to the complex secretory functions, must be regarded as the earliest abnormal deviation induced by an operation. Presuming that interruption, or partial suspension of the secretory functions, first of the wounded organs, but nearly simultaneously of the whole economy, must induce engorgement of the arterial capillaries conveying blood to those organs for the purposes of secretion, we might naturally infer that capillary congestion must also constitute an element of the predisposing causation, and possibly the most important. That engorgement does speedily take place in the structures of a wounded part, after the infliction of an injury, is well known, and the effects of the bandage, a most valuable therapeutical measure, designed to prevent such engorgement, early advised and successfully employed by our distinguished countryman, Dr. Dudley of Kentucky, in the treatment of luxations and fractures, would prove, did a doubt exist, the early occurrence of such engorgements. If I were to attempt a definition of the pathological conditions predisposing to the *inflammatory process induced* by a surgical lesion, I should say it was

'a changed action of the structures, compounded of perverted innervation, secretion, absorption, attended with more or less engorgement of the arterial capillaries;' and from the efficacy of well directed pressure, and other measures calculated to counteract tumefaction in injured parts, so often seeming likewise to prevent inflammation, I am disposed to regard traumatic engorgements as the chief element in the predisposing causation of vulnerary phlogosis.

It will be improper, in a paper like this, designed to be practical, to speculate any farther on the intimate nature of this obscure yet interesting subject. I may, however, hereafter resume its consideration, but shall examine it experimentally, in the hope that some new facts may be developed by that mode of investigation, to divest it of the obscurities that now encompass it.

Regarding secretion as the most important of the vital actions both in the continuance and restoration of the health of the economy, and the condition in question as essentially consisting of disturbed or suspended secretion, the first indication manifestly is to disembarrass the secretory functions; and for this purpose, after numerous and most satisfactory trials, variously modified, I decidedly prefer *early purging*. It is true in certain cases we cannot avail ourselves of this valuable therapeutical measure without danger of doing hurt, not because the purgative is intrinsically improper, but from the disturbance to the wound liable to occur during its operation. This will be the case in nearly all the operations involving the bowels; in other operations it will be safe to purge, and as a general rule, the earlier it is done the better. The practice that I have adopted for many years, is to purge in five or eight hours after the completion of a capital operation, especially when involving organs of great delicacy of structure, and liable to the more acute and intractable forms of the inflammatory process. This will be the case after most of the operations involving the membranes of the brain; the pleura and the organs invested by it; the peritoneum and the organs receiving a tunic from it; the eye; and many others. After extensive operations, more especially when deeply seated structures are involved, it will invariably be necessary to purge early and impressively. In many instances the operation of a single cathartic will put an immediate stop to the tumefaction of the wounded structures, and prevent undue development of the inflammatory process. Frequently, too, it will exert the best effects in tranquilizing the system after severe nervous shock, by bringing on a well-balanced reaction. I have often known the gastric, or præcordeal distress, so apt to follow painful operations, promptly relieved by the free operation of *a cathartic enema*. In such cases patients soon fall asleep after reac-

tion is established; and seldom fail to escape traumatic fever of acute character, as well as undue inflammation of the wounded structure. In many instances purgative enemata, composed of active constituents, will supersede the necessity of using internal cathartics; and I have made it a rule for many years to employ them as the first means of exciting purgation when allowable. Should they fail to operate sufficiently, an internal cathartic can be administered; and, generally, its action will be materially quickened, even by the imperfect operation of the enema. In all cases purging should be effective, and if copious feculent discharges are not procured, the remedy must be repeated in ten or twelve hours after the exhibition of the first cathartic dose. Should traumatic swelling seem obstinate, or if the tenderness and throbbing of the wound persist, purging will be required daily until those conditions are corrected.

The agents with which purging is to be effected, in some instances, require careful adaptation. This will be the case when an operation has caused considerable gastric disturbance, or when the bowels have been disposed to constipation or diarrhœa previous to an operation. I have invariably preferred enemata, of decided cathartic powers, when there was much gastric disturbance after an operation, and by repeating the remedy once an hour, or oftener if the case was urgent, I frequently succeeded in purging effectually without the use of an internal cathartic. If the enema fails to purge sufficiently, it generally relieves the stomach so far as to enable it to bear an internal purgative; and nothing has succeeded better in my hands, then, than the following combination:

℞. Aloes, gr. vij.
Calomel, gr. viij.
Scammony, gr. vj.
Ipecacuanha, gr. j.

Make four pills, to be taken at a dose.

The enema I generally employ is simply warm salt water, a heaping table spoonful of salt to a pint of warm water. I have often used three times this proportion of salt, and have yet to witness the first case in which it has done injury even in the slightest degree.

After every operation, if practicable, the wounded parts should be compressed gently and well supported, and kept moist with cold or tepid water for at least thirty-six hours. I have made it a rule for many years to irrigate wounds of the thoracic and abdominal walls with tepid water, which, if used regularly, so as to keep the compress constantly wet nearly to the extent of dripping, answers as a safe and effectual *means of preventing* undue exaltation of temperature in the

seat of the wound. The tepid water should also be preferred when the temperature of the wounded parts remains long depressed; or when the extremities of feeble or aged persons are the seats of wounds. Cold water should be preferred to other parts of the body, especially during warm or mild seasons, and with vigorous constitutions it may also be used to the pectoral and abdominal walls if there is good reason to apprehend violent reaction. It will be necessary, after reaction is fully re-established, to attend carefully to the effects of the supporting bandage. If it causes a painful sensation of pressure, or seems needlessly tight, it will be necessary to loosen it slightly. As a general rule, however, it would be safest not to disturb the bandage for the first day after an operation, as one of its objects is to prevent traumatic swelling during that period. If these measures seem to be doing their work properly, they may be continued throughout the whole course of the adhesive process with such modifications and additions as may become necessary from time to time. If, however, inflammation should supervene, they will not be so well suited to its treatment as other measures, although not absolutely improper, and should be laid aside.

In some cases the traumatic nervous disturbance induces great restlessness, thirst, gastric distress, with occasional nausea or vomiting; an imperfectly or excessively developed reaction, with corresponding conditions of the animal temperature; and now and then delirium. In this state of the system I have derived more benefit from the internal use of pounded ice, or iced, or cold water, to be continued as long as patients desire them, than from any other remedy I have ever employed; and when a troublesome thirst exists, they will prove as composing and soothing as they are grateful in allaying that most distressing symptom. It is not more remarkable than true that refrigeration, under these circumstances, speedily quiets the nervous agitation, and induces an equable and moderate reaction. I have, in very many instances, seen the pounded ice, or cold water, freely taken into the stomach by persons almost pulseless, and nearly as cold as a cadaver, speedily followed by a full pulse and a warm skin; and when such a state as I have just pointed out is speedily relieved, it never fails to impress upon the adhesive process that succeeds to it favorable characters, by averting or correcting the traumatic conditions that predispose to inflammation.

When great nervous depression speedily supervenes upon an operation or accident, and especially if the patient is constitutionally delicate, *or has been* enfeebled by previous disease, it would not be safe to *trust to the natural powers* of the system alone to develope the proper

reaction, but a speedy resort should be had to diffusible stimulants, and nothing answers better, under such circumstances, than brandy toddy with a few drops of the water of ammonia, administered after short intervals, and repeated until reaction is established or begins to develope itself with decided energy. Should traumatic pain complicate such depression, or exist without it, as will sometimes be the case, it would be proper to unite with the stimulant some narcotic, such as opium or some of its preparations; and such has been my practice for a number of years. If nervous depression continues more than three or four hours after an operation, the reaction that follows is liable to put on depressing characters, or to degenerate into a fever of adynamic nature, either of which will essentially impair the adhesive process, if not endanger life.

It is all important that motion of the parts involved in an operation should be carefully guarded against during the vulnerary stage; and to insure adhesion, the surgeon cannot commence too early after the wound is dressed, with the restraints necessary to guard against undue exertion of the body. He must also take care that the patient's mind shall not be improperly exercised during this stage, as such exertion, in many instances, has induced troublesome degrees of traumatic inflammation. The diet should, invariably, be restricted during the traumatic stage. For the first day after an operation little food will be required; and what is allowed should be liquid, and unstimulating. If much blood has been lost during an operation, and more especially if the patient is anæmic, the nourishment must be more sustaining, and soup, or panada seasoned with wine, should be preferred. As soon as reaction is established, the soup, or panada, must be discontinued, and a less exciting kind of food substituted for them, which should be the diet throughout the adhesive stage.

In support of the efficacy of early purging, after capital surgical operations, in preventing traumatic inflammation, I will state that I have operated for stone in the bladder seventy-nine times, and out of this number I purged seventy-five of the patients in from five to twelve hours after the operation, and in not a solitary instance did inflammation occur in any degree beyond what was necessary for the healing of the wound. In some of these cases the calculi were of such large size as to require to be crushed before they could be extracted, while others were large enough to render extraction difficult, in either case necessarily subjecting the bladder to more or less injury. The only cases I have lost were the four I did not purge. I have from this statement, prevented traumatic inflammation in seventy-five lithotomy *patients by early purging, all of* whom experienced rapid recoveries; *while I have lost four who were not* purged.

I have operated for ascites fifty-eight times, and some of the serous accumulations were very large, one exceeding ten gallons. I purged in every case from five to twelve hours after the operation, without inflammation succeeding in but a solitary instance; and in this, paracentesis seemed to aggravate the pre-existing phlogosis induced by catarrh. I have purged in a few hours after reducing strangulated hernia in thirty cases, and succeeded in preventing inflammation in every instance. In fourteen cases of vesico-vaginal fistula, for which I have successfully operated, I was enabled by early purging to avert inflammation in every instance, and some of the cases were very bad ones, requiring that the bladder should be extensively irritated by the operation. I have operated for more than two hundred cases of stricture, and by early purging undue inflammation was prevented in every instance, and perfect cures followed. Besides the cases here referred to, I have, in hundreds of instances, purged early after severe surgical operations, and uniformly with the effect of averting undue degrees of inflammation, or of preventing phlogosis altogether. It is true other measures were also employed in many instances, in connection or alternation with purging, but they were of secondary importance, and merely used as auxiliaries or as temporizers.

ART. II.—*A report of two cases illustrative of the difficulty occasionally met with in the diagnosis of Scrotal Tumours.* By CARTER P. JOHNSON, M. D., Professor of Anatomy and Physiology, Richmond, Va.

During the past winter I was asked by Dr. A. G. Wortham to see a patient, whose history I learned was this: He was a negro man about fifty-five years of age, tall and thin, and of delicate frame. His general health was good, with the exception of a protrusion in the right inguinal region, which had existed for several years, and which he always supposed to be a hernia. For some time he had worn a truss, with comfort and with the effect, he thought, of restraining the protrusion. No physician, however, had ever examined him in order to ascertain whether the protrusion of which he complained was in fact a hernia.

A few days before I saw him he was attacked violently with cholera morbus, and during one of the paroxysms of vomiting and purging, he stated that he felt something give way, and immediately became aware of the formation of a very large tumour in the upper part of

the scrotum. He supposed, of course, that his hernia had descended more fully than usual, and getting to bed he attempted to reduce it, as he was in the habit of doing, but found that he was unable to effect it. Dr. Wortham was then sent for, and found him in a condition almost precisely similar to that in which I saw him twenty-four or thirty-six hours afterwards. He was then lying upon his back with his thighs flexed, his countenance calm and free from any expression of anxiety or suffering, his pulse regular, though feeble, his respiration normal, his skin comfortable, his abdomen soft, his bowels having been moved naturally and copiously; there was no vomiting or nausea. In the right inguinal region there was a very large tumour, coming out apparently from the inguinal canal through the external ring, and passing down along with the cord as far as the superior two-thirds of the scrotum. The tumour did not reach the bottom of the scrotum, the testicle of the right side being plainly felt behind and below it. Its shape was pyriform, its apex pointing downwards, and it completely filled and forcibly distended all that portion of the scrotum which was occupied by it. But the character which was most remarkable was its very great density and hardness. It had not the elasticity of a well filled hydrocele, nor the doughy feel of an ordinary hernia, but it presented rather the density and resistance of a swelled testicle. There was a good deal of tenderness about the whole tumour, but particularly near the external ring.

Repeated well directed efforts at taxis having failed to make any impression upon the tumour, it was determined to put the patient upon the plan of treatment recommended by Mr. Bransby Cooper in cases of irreducible hernia, viz.: to keep him constantly upon his back with the thighs and legs flexed, cold applications applied to the tumour, and small doses of calomel, antimony and opium administered internally. With occasional slight variations, demanded by the varying condition of the patient, this plan of treatment was steadily continued for about two weeks, without producing any appreciable effect upon the tumour. A blister was then applied, and was followed by some diminution in the size of the tumour, but by no alteration in its very great hardness. The general health of the patient began now to decline, the pulse to become more frequent and feeble, and the skin cool and moist. Tonics and stimulants were resorted to, but with no effect. He continued gradually to become more and more feeble, and died about five weeks from the time I first saw him. During the last two weeks of his life the tumour diminished very much in size, probably two-thirds, but it retained to the last that *great density* which had characterised it from *the beginning.*

Upon a post-mortem examination a small sac was found at the upper portion of the scrotum, at the lower portion of which was a small, firm, dense tumour, about the size of a walnut, connected with the envelopes of the cord. This tumour was fibrous. Above this tumour the tissues were healthy, until we approached the external ring, where they became discoloured and emitted a gangrenous odour. Passing the finger through the external ring, directly towards the cavity of the abdomen, an opening was found communicating with the cœcum, and upon farther examination that intestine was found adherent to the parietes of the abdomen just opposite the external ring, and perforated by an opening about half an inch in diameter. Pursuing the examination along the inguinal canal, a large slough was found occupying its course together with a good deal of fœcal matter, and at the upper limit of the canal an opening was found into the ascending colon which was adherent to the parietes of the abdomen around the internal ring. The other portions of the alimentary canal were normal both in structure and in position, and no evidence was afforded by the examination of the previous existence of any hernia.

What was the character of the tumour just described, and how do the post-mortem revelations explain the symptoms before death? The only answer to these questions which has suggested itself to me, though it is by no means free from objections, is this: I suppose that no hernia ever existed in the case, but that the patient mistook the fibrous tumour upon the cord for that disease; that in consequence of inflammation of the peritoneal coats of the cœcum and colon which probably occurred during the attack of cholera morbus, these intestines contracted adhesions to the abdominal parietes; that softening of the entire structure of the intestines took place at those points, and that during the violent efforts of vomiting and straining which characterised his attack, rupture of the intestines at one or both points was produced, and their contents poured either along the canal or against the external ring; that the presence of this foreign matter caused a high degree of inflammation along the cord, which resulted in the effusion of lymph, of which I am inclined to think the tumour was essentially composed.

But whatever may be the explanation we give to the phenomena, the case is important as illustrating the difficulty which sometimes attends the diagnosis of this class of tumours, and as indicating the great caution with which we should decide upon the propriety of active interference in such cases. Had an operation in this case been attempted, on the supposition of the existence of hernia, which the *history of the disease,* as detailed by the patient, rendered very pro-

bable, no possible relief could have been afforded, and much risk would have been incurred.

The second case I would mention was sent to my care by Dr. Macon of Hanover, with a note stating that the patient had been the subject of inguinal hernia for some time, that the hernia had become strangulated a day or two before, and not having been able to reduce it he had sent him to me to be operated upon. The patient rode to Richmond in a carriage some twenty miles, and when I saw him he had been placed in bed in the Infirmary. I was struck with the calm and placid expression of the countenance of the patient, so different from that which usually characterises cases of strangulation. He complained of no pain, and only a little of the fatigue of his journey. Upon examining the seat of disease, I found a very large scrotal tumour, filling the whole scrotum and extending up to the external ring. The tumour was painless and elastic, and fluctuation was distinctly evident. At first I could detect no evidence of hernial protrusion, and I began to suspect that my friend who first had charge of the case had not shown his usual sagacity, and had mistaken a hydrocele for a hernia. But upon a more careful and thorough examination I was convinced that he was correct, and that if there was hydrocele there was hernia also. Being satisfied of this, the patient was put in proper position, and without much difficulty the hernia was reduced. There still remained a large scrotal tumour filled with fluid, and thinking that this might have been effused into the hernial sac, I applied pressure to the tumour from below, and had the gratification to find that the whole of the fluid was passed up into the cavity of the abdomen. The application of a well-fitting truss completed the treatment, and the second day afterwards the patient went back to Hanover.

This case presents several points of interest. It is one of several cases which I have seen sent from a distance with strangulated hernia to submit to an operation, and in which the strangulation has spontaneously subsided, allowing of an easy reduction of the hernia by the taxis. This effect is probably produced by the conjoined action of the motion and fatigue of the ride, and the relaxing effect of the fear of the knife. The large effusion of fluid into the sac is another point of interest in this case. I did not learn that it existed before the patient left home, and I am inclined to think that it may have aided very materially in the relief of the strangulation, the engorged and congested vessels thereby relieving themselves, and thus diminishing the mass of the intestine below the point of stricture. And lastly, the case is important as indicating the very great necessity for a thorough and *careful examination of every* case of scrotal tumour before deciding

upon an operation. Any other than a most accurate examination of this case, at the time it was first presented to me, would have led the surgeon to the diagnosis of a fluid tumour and to the natural inference of the existence of hydrocele, especially in the negro where the test of transparency cannot be applied. If under this impression a trocar had been plunged into the tumour, a hernial sac would have been penetrated, and in all probability a portion of intestine perforated!

ART. III.—*On the Sparkling Eye.* By JOHN H. DIX, M. D., Boston, Massachusetts.

Dear Sir:—Though from its extreme rareness and its accompanying conditions, the following case is not likely to be of any practical value in ophthalmic medicine, it is worthy of a place in your archives as the first instance here observed of this pathological curiosity.

I find in the journals no instance of it recorded in this country, nor has it before been seen by any among my own medical friends or by myself. The history and description of it are given in detail, because the appearances differ somewhat from the case related by Mr. Wilde, under the designation of Cholesterine Cataract, in the Dublin Quarterly Journal, May 1848, and seem to be very much more decided and brilliant than those upon which the remarks of some other foreign writers, as Desmarres and others are founded. The case was read by me to the Suffolk District Medical Society, under the title of crystallization of the vitreous humour.

Mr. M. S., æt. 32, of Portland, Maine, had for some two years been blind from presumed amaurosis, when, about a year ago, it was observed that in the right eye a distinct and apparently lenticular cataract of a slightly yellowish whiteness existed. The left eye exhibited no affection of the crystalline system, but through the pupil reflected from the fundus of the globe a reddish yellow glare. In the left eye, the iris was tremulous. With the right eye, he had a perception of light; with the left, none. It was impossible to determine from the observation of the patient, or his friends, whether the cataract and blindness of the right eye were coincident or not.

Mr. S. being informed that the removal of the cataract could be serviceable only in the event of the eye being found not to be amaurotic like its fellow, chose to avail himself of the very small chance of

relief which an operation offered. I confined the first operation to a central division of the capsule, leaving the lens, which seemed to be somewhat more hard than its color had indicated, in situ. Four weeks after, no inflammatory symptoms having occurred, and there being no evidence of absorption in the lens, I divided both the capsule and lens partly; the lens being softer than at the first operation.

This operation has been repeated some four times in the course of the year. In the two last, the capsule and fragment of lens remaining seemed to be of a leathery toughness, and I reclined it with partial clearing only of the pupil; the cells of the vitreous humor being too much broken up to retain it where it was left by the needle. At the last operation, while in the act of displacing the cataract, I observed an appearance at the fundus like that in the left eye, and do not therefore propose any thing further. In the meantime the patient thinks that he sees very much more light, and can at times distinguish large objects, as buildings.

Now, two months since the last operation, which was followed by some pain for two weeks, without any visible evidence of inflammation, the eye presents an extraordinary, and in my experience, unprecedented appearance.

Throughout the anterior and posterior chambers of the aqueous humour, and as deep in the region of the vitreous humour as it is possible to look, are innumerable brilliant particles, floating and darting about with every motion of the globe. They present to my eye much the same appearance as small fragments and spiculae of glass, transparent, and some of them occasionally decomposing the rays of light and reflecting the prismatic colours. My friend Dr. W. Morland, who subsequently did me the favour to examine the eye with me, thought that they might more aptly be compared to small fragments of sparkling mica. They vary in size from the least visible magnitude to that of a very small pin's head. They are of a little greater specific gravity than the medium in which they float, inasmuch as, when the patient has been for some time erect, a heap of them accumulates in the lower part of the anterior chamber, to the depth of about a third or quarter of a line. After holding the head forward for a few minutes, and then throwing it backwards, they will be seen in great numbers upon the whole surface of the iris, and it was the bright, sanded appearance of the iris which first attracted my attention.

From what texture of the eye is this formation derived? If the crystalline lens in its normal condition were cut up into small pieces, they might, retaining their transparency, very well present this appearance: *but the lens was opaque two* years ago; the crystalline system

by repeated breaking up was reduced to perhaps one sixth of its original bulk some four months ago; when this appearance did not exist, and when it was first observed, the fragment of capsule and possibly lens had not sensibly diminished from the preceding operation. If moreover this appearance were attributable to the simple breaking up of the lens, it should be a matter of not unfrequent occurrence. I am disposed to refer it to the vitreous system, because it alone of the three humours is of sufficient bulk to furnish the apparent amount; because the shining particles are as numerous in a given space, deep in the body of the vitreous humor, as in the anterior chamber; because, from the tremulousness of the iris in the left eye, a disorganization of the vitreous humour of the right was probably impending; and because, from the frequent operations upon the lens, and the subsequent efforts to recline or depress the capsule, great mechanical disturbance of the vitreous humour must have been effected.

In reply to a letter from me, Dr. W. E. Chase, the medical adviser of Mr. S. at Portland, writes a year after my last examination of the case: "The iris seems now almost entirely composed of brilliant particles moving in their places, but remaining attached to the membrane. Throughout the anterior and posterior chambers an almost inconceivable number of these icy, glassy, brilliant spiculae are darting in every direction, and really present a very beautiful appearance, to me quite anomalous. Did not observe any in the other eye."

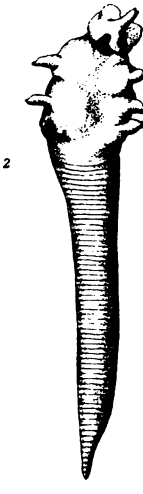
From this I infer that a considerable increase of this morbid product (probably cholesterine) has taken place within a year. It should be noted also, that as in the case of Mr. Wilde, it occurred only in an eye, subjected to some mechanical disturbance. This case differs from those observed in Europe, by showing a silvery, instead of golden lustre.

Mr. S. was of strumous habit and subject to hæmoptysis.

ART. IV.—*The parasites of the human follicle and hair sac.* By P. H. CABELL, M. D., Richmond, Va. [With a plate.]

These remarkable parasites are found inhabiting the sebaceous follicles and hair sacs, both in a state of health and disease; they seem therefore to have little pathological importance; and to exist in these follicles, not because of any unhealthy action going on there, but because they there find the conditions requisite for their existence and

1



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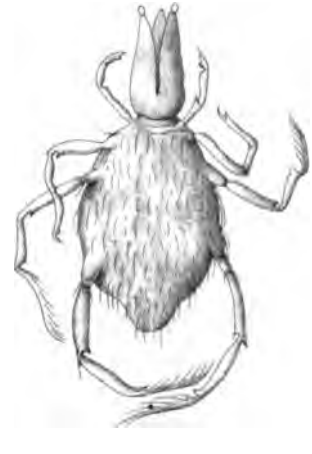

F. Sinclair Lithog

1 *Entozoon folliculorum.*

2. *do.* *do.*

happiness. A torpid state of the skin has been thought favourable to them, and by some they are accused of being the exciting cause of acne punctata and comedons. Wilson considers them as acting as counter-irritants to the torpid hair follicles, and stimulating them to increased activity; but these are all merely suppositions; and we have no reason to think them incompatible with perfect health and tonicity, both of the skin and general system. I have seen three distinct kinds of these parasites, the one marked No. 4 being totally unlike the others. Nos. 1 and 2 have many points or resemblance, but still differ so much as to warrant the belief of their being distinct beings of allied species, and not the same animal under different stages of development, and I have never seen, nor have I heard of any observation in which one was found passing into the other. The embryonic parasite is also given, marked No. 3, seen in two positions. The first marked No. 1 is called *entozoon folliculorum;* it has a head, eight short legs, and a long cylindrical body. The head is composed of a proboscis placed between two palpae, the proboscis as well as the head and limbs can be protruded and retracted. The thorax is divided into four obscure rings, one corresponding with each pair of legs, and has a distinct line of demarcation separating it from the abdomen. This animalcule possesses great tenacity of life, and lives many hours in oil, moving and retracting its limbs and head. The length of the parasite is .26 of a millemetre; the millemetre being about half a line. The second in order is much longer; has only six legs and a very long and tapering abdomen. The head is similar to No. 1, but its thorax melts insensibly into its abdomen; both engravings represent the parasites each with one leg retracted completely, having the appearance of a mere ring. The length of No. 2 is .35 of a millemetre. The imperfect entozoons are only .03 of a millemetre, and have been seen by me only in the sac with the short, eight legged parasite. The last one to be mentioned differs from the others both in shape and colour. I have found it once only. Whether the hair follicle is its proper habitation, or whether it found its way there accidentally, I am unable to say; but it is certainly capable of existing there as well as the parasites first described; for it is equally minute, being invisible to the unassisted eye. Its colour is orange red, and its form so much like the acari, that I have applied the name acarus folliculorum to it, and have always spoken of the other parasites simply as entozoons. Its length is .26 of a millemetre; the head is very long, and mitre shaped, and contains between its two divisions a lancet shaped organ, resembling a tongue. The thorax is very short, and has articulated to it the two anterior pair of legs, which have many articulations, are shorter than

the posterior, and terminated by two claws. The abdomen is rounded, covered with hairs, which are irregularly and sparsely scattered over the body and limbs, more abundant at the articulations. The posterior pairs of legs are much longer than the anterior, and terminate not in claws, but in many long and stiff hairs. The body is filled up with a granular, oleaginous looking substance; and since, the preparation in Canada balsam has grown transparent by keeping, six or eight globular bodies, all of the same size, and looking like eggs, have been observed in the interior of the abdomen.

My object has been merely to describe these parasites, which I have examined with great care, and I have purposely avoided hazarding any speculations as to their origin or pathological importance. The drawings are magnified 270 diameters, and are faithfully copied from parasites now in my possession.

ART. V.—*Dislocation of the shoulder-joint, complicated with longitudinal fracture of the humerus.* By F. J. BUMSTEAD, M. D., New York.

Perhaps there is no more trying class of cases to the practical surgeon than dislocations complicated with fractures. He is often called to the patient at a late hour, when the parts are swollen and ecchymosed, and when a satisfactory diagnosis is by no means so easy as is laid down in books. The treatment is necessarily long and tedious; and after all his labour, the surgeon but too often receives only reproaches from the patient and his friends, who are ever ready to commence a law suit against him, while a compassionate jury are not slow in awarding damages.

Since the various ways in which dislocations may be thus complicated, was thought worthy of such particular attention by Sir Astley Cooper, in his work on fractures and dislocations, no apology is needed for presenting the following case, which is, so far as I can ascertain, entirely unique. The notes were taken on the spot.

CASE. July 18th, 1851. G. M., aged 35, a stout, muscular mechanic, was thrown from a horse and struck on his head. He fell in front of a chaise, which passed over his body. His skull was severely fractured, and he died in consequence in five hours. At the autopsy, twelve hours post-mortem, I took the opportunity to examine a dislocation of the left shoulder, which appeared to be a simple dislocation

forwards under the clavicle. Externally there was no swelling, bruise or ecchymosis, and no sign of any direct violence having been done to the part. No crepitus was felt in the examination. The head of the bone could be distinctly felt below the clavicle. The remark was made, that the shoulder was less flattened than usual, in similar cases, but no one suspected the existence of any complication.

On dividing the integument and deltoid muscle, and exposing the head of the bone, the greater tuberosity was found to be split off from the shaft of the bone, by a fracture which took the course of the bicipital groove, and cut its way out through the posterior bicipital ridge, an inch and a half below the upper surface of the tuberosity. The two fractured surfaces were separated a quarter of an inch by measurement. The head of the bone was situated under the clavicle, and internal to the coracoid process. The greater tuberosity was beneath, and in contact with the coracoid process; the coraco-brachialis muscle and short head of the biceps overlying and at first concealing the fracture. The long head of the biceps was drawn into the fissure caused by the fracture. The three tendons attached to the greater tuberosity were tensely stretched. There was some effusion of blood into the cellular tissue about the capsule, which was extensively ruptured internally.

On sawing out the parts of the bones contiguous to the joint, for farther examination, there was no abrasion found on their external surface. The two fractured surfaces presented a beautiful view of cancellated structure, which was uninjured, and perfect even to its minute spiculae.

Remarks.—The impression made on the minds of those present was that the fracture above described was not caused by direct violence, of which all signs were absent, but was due to the traction exercised on the greater tuberosity by the three tendons attached to it, while the head of the bone was thrown forcibly inwards. If the patient had lived the dislocation might have been reduced without the fracture being discovered; since the long head of the biceps, drawn between the fractured surfaces, prevented any crepitus being felt. On the influence which this state of the parts might have exercised on the final result of the case, it is needless to remark.

ART. VI.—*On Pneumonia.* By THOMAS JOHNSON, M. D., late Professor of Anatomy in the University of Virginia.

Several reasons incite me to write upon pneumonia at the present time. Recently this disease has prevailed to a considerable extent in our community, and contrariety of opinion has prevailed with regard to its pathology and the proper modes of treatment. My individual opinions respecting the pathology and treatment of this interesting disease, differ very widely from those which I have often heard expressed by others; but I am sure no captious spirit influences my judgment, my only motive, I sincerely hope, being fairly to investigate a subject which must interest every philosophical practitioner of medicine. Indeed, no pathologist can view with indifference any of the diseases of such vital organs as the lungs, and much less the one under consideration.

PNEUMONIA (from πνευμων, *pulmo, a lung,*) is inflammation of the substance or parenchyma of the lung, and may exist in one or both of these organs, or may affect them in succession. As a general rule, but a single lung is attacked, though both are occasionally involved from the beginning of the disease. According to the observations of Andral, made at La Charité Hospital, in Paris, the right lung is three times as often attacked as the left. It would be natural to infer, from the greater capacity of the right lung, that it would be more frequently the subject of inflammation, but why the difference should be so preponderating, is difficult to be accounted for upon any principles yet divulged to us. Every physician must have observed how much oftener the right or larger pleura is the subject of inflammatory action than the corresponding one. Now the most superficial anatomist must perceive this fact is as difficult to be accounted for as that which the great French pathologist has recorded respecting pneumonia.

Another interesting fact connected with pneumonia is with regard to the part of the lung most obnoxious to inflammation. Laennec, probably the most careful observer of the affections of the thorax who ever lived, long ago called attention to the frequency of its commencement in the lower lobes of the lungs. Sometimes the whole lung is involved in the disease, but often, especially with children, the inflammation is quite circumscribed. When the upper lobes of the lungs are affected, not only is the dispnœa more distressing, but the danger *is more* imminent.

Watson correctly observes, "inflammation of the bronchi constantly accompanies inflammation of the parenchyma;" for wherever it exists a corresponding bronchial redness and engorgement may be seen exactly corresponding to its extent. Hence he infers, "You may have bronchitis without pneumonia; but pneumonia without a corresponding extent of bronchitis is perhaps never seen."

Pleuritis is another complication of pneumonia, and so frequent is it as to deserve the most serious notice of the physician. When the inflammation passes from the lung to the surrounding pleura, serious effusion or adhesions, or both, are apt to occur, constituting Pleuro-pneumonia. Pneumonia may, and indubitably sometimes does exist without concurrent pleuritis; though I have never made an autopsy for pneumonia where the pleura did not evince the most unequivocal marks of a recent inflammation. It may be readily supposed that the effusions or adhesions which so constantly follow in the train of pleurisy will form no inconsiderable embarrassment in the diagnosis of pneumonia, especially with regard to the physical signs, as I shall have occasion hereafter to notice. Where pleuro-pneumonia exists for some time, the lung becomes so consolidated as to justify the term *carnification*, for then it cuts like a muscle.

Exanthematous diseases, especially rubeola, are frequently followed by bronchitis, which runs into pneumonia. It has been thought that the disease which has preceded the pneumonic affection causes a considerable modification in its progress and termination, and I am disposed to believe very justly. I have never seen pneumonia supervening upon scarlatina that was otherwise than speedily fatal, the patient perishing with asphyxia.

A low adynamic fever may either accompany pneumonia primarily, or may be developed in its progress, in consequence of depressing causes, such as advanced age, intemperance, insufficient or bad food, exposure to cold, foul air, or an unhealthy season. This constitutes the Asthenic Pneumonia or Pneumonia Typhoides, which has prevailed to a considerable extent lately among the negroes employed in the tobacco factories of this city. This form of pneumonia differs remarkably from the sthenic in many of its phenomena, for, as Dr. C. J. B. Williams justly remarks, the local symptoms are by no means prominent, and although there may be pain, cough, and very disordered breathing, the obtuse state of the mental faculties prevents attention from being drawn in a marked manner to these symptoms. The vital functions are greatly disturbed; the breathing is heaving and laborious; the *pulse is soft,* feeble and very frequent, ranging *from 100 to 130 per minute; the* skin, at first, is dry and harsh, but

soon becomes cold and clammy, the sweat having a peculiarly disagreeable odour; petechiæ or vibices frequently make their appearance, but otherwise the skin is of a cadaverous paleness; the eyes are remarkably dull, suffused, and the conjunctiva is injected; the urine is scanty, high coloured and thick; the tongue is brown and soft, but speedily becomes dry, chapped and very dark; the fœces are of a very dark brown and disgustingly offensive. A low muttering delirium invariably accompanies asthenic pneumonia, though the patient is easily aroused to consciousness, and then reasons as well as usual. Post-mortem examinations show the lungs to be engorged, brittle, and exuding a dark grumous blood, resembling that of the spleen. In the pleural cavities a thin, turbid and offensive serum, intermixed with flacculi of lymph, is usually found. As might readily be inferred, this is a most dangerous complication of pneumonia.

Symptoms.—Fever, preceded by rigors, accompanies all phlegmasiæ, but in sthenic pneumonia it is of a very inflammatory character, the pulse being hard, sharp and frequent, and the blood exhibiting the buffy coat. The face is flushed, the eyes injected, and the headache intense, especially over the eyes. The breathing is quick, the number of respirations being from 25 to 35 or more in a minute, and if pleuritis exists, may be accompanied with a stitch in the side at each inspiration. The pain in the chest, which is an early symptom, is deep seated, under the nipple, or referred to the region of the scapula, or sternum, or it may be diffused and dull. It is astonishing how little pain frequently attends the most extensive pneumonic inflammation. I have known a stout man, previously in good health, die of inflammation of the left lung, the consequence of a mechanical injury, who never complained of pain, but only of a feeling of heat and weight in the affected organ. There is commonly cough at the commencement of the disease, which may be unattended by expectoration at first, or small portions of mucus are thrown up, which look foamy. If the attack is very violent, the dyspnœa is urgent, and the patient lies upon his back, with the shoulders elevated, gasping for breath. Muscular power is soon gone, and great exhaustion follows, accompanied by gastric irritation or bilious vomiting. Delirium ensues, denoting that the arterialization of the blood is interfered with by the pulmonary affection. Coma is a most alarming symptom. In the course of a few days the tongue becomes loaded with a white or yellowish fur, which, in the progress of the disease, becomes brown and dry.

The Sputum is pathognomonic of pneumonia and is very peculiar. It consists of a viscid semi-transparent mass of a rusty colour, and so *coherent as to be* expectorated with difficulty. In the beginning, or

on the decline of the disease, the tawny colour only streaks the jelly-like mass, but its tenacity is so great as to adhere to the vessel in which the patient spits, though it may be turned upside down. As the disease advances the sputa may become mixed with a brown, a yellowish, a greenish, or a pus-like offensive matter, the sure indications of thorough disorganization.

The decubitus or posture of the patient is characteristic. In a violent attack, it is not on the affected side, as the old physicians said, and never on the opposite side, but it is dorsal, with the shoulders elevated instinctively to assist respiration. There is not a more cheering evidence of incipient convalescence than to see the patient turn from the dorsal position and lie upon the affected side, especially if he sleeps soundly in this position.

In mild cases the disease may become alleviated in the course of a few days, by a general declension of the prominent symptoms; by the pulse becoming softer and less frequent; the dyspnœa less distressing; the cough looser, and the sputa not so much tinged, not so gelatinous, more abundant and opaque; the skin becoming softer, moist and cool. Critical evacuations are probably more frequent in this disease than any other.

The progress of fatal cases, remarks Dr. Williams, is marked by increasing failure of the strength and more hurried respiration, but the dyspnœa does not always increase. The sputa retain their sanguinolent, gelatinous and viscid characters, being coughed up with difficulty. A few hours before death the cough ceases, the pulse is thready, very frequent and irregular; the countenance is pallid and cadaverous; the skin cold and clammy; the lips livid; the throat rattles in the gasping efforts to breathe; the sensorial functions give way; coma ensues, and the patient expires asphyxiated.

Anatomical Characters.—Before we can appreciate the physical signs of pneumonia, it is necessary to pass in review a few of the developments made by post-mortem examinations. In the first, or mildest stage, the blood vessels of the affected part are engorged, the blood soon effusing into the air cells, giving the structure a red appearance and increased weight, but it still crepitates, like a sound lung, when rubbed between the fingers. In such cases death does not usually ensue unless both lungs are extensively congested. A common error with inexperienced anatomists is mistaking the settling of the blood in the posterior part of the lungs, at the close of life, for sanguineous engorgement. The red in real engorgement is mottled by different shades, and occupies the lower part of the lungs; besides, the specific *gravity, as I have said above, is* increased.

This condition rapidly passes into solidification, and when the lung is cut into it resembles liver. This constitutes the second stage of pneumonia, and is called *red hepatisation.* A section of hepatised lung sinks in water, and readily breaks down under the pressure of the fingers. When a hepatised lung is torn, numerous granuli are observed, of a bright red colour, and not larger than the heads of small pins. These are probably effusions into the air cells, becoming concrete, or interstitial deposites of lymph in the parietes of the bronchial terminations. Sometimes the pulmonary structure resembles, when torn, the spleen, a condition termed *splenisation,* or it may be so consolidated as to justify the appellation of *carnification.* I have recently seen a beautiful specimen of the latter condition.

The third stage is *yellow hepatisation,* a diffused suppuration, which seldom collects into a distinct abscess. This consists in the conversion of the semi-solid lymph into an opaque, light yellow, soft, friable matter, which is speedily converted into pus. If a section is made of yellow hepatisation, the pus may be readily scraped up on the blade of the knife.

As I have never met with Gangrene as a termination of ordinary pneumonia, I shall not treat of it in this paper, but I would respectfully refer the reader to Dr. Williams' treatise.

Physical Signs.—If the ear or the stethoscope is applied to the chest of a sound person, the air is heard to pass through the cellular structure of the lung, creating a peculiar sound, which is the vesicular murmur. But if the lung is slightly engorged, this murmur is louder than usual, and the air appears to pass abruptly from the bronchi into the cells. This is the rude rhoncus or rattle. This rattle is not frequently heard, because the chest is seldom examined until it has ceased to exist. Percussion is clear.

In the first stage of pneumonia the ear often detects another sound of the greatest consequence, because it is pathognomonic of it. This is the crepitant rhoncus, a peculiar crackling, resembling that made by rubbing a lock of hair near the ear between the fingers. Crepitation does not always exist, but when it does it is conclusive evidence of inflammation of the lung towards its surface. Percussion elicits rather a dull sound over the diseased surface if there be any effusion in the air cells or in the fine bronchial tubes. The puerile respiration spoken of by Dr. Stokes, as indicative of the commencement of pulmonic inflammation, I imagine, is not different from the harsh rattle which other authors mention.

As Dr. Gerhard correctly remarks, "the signs of the second stage *are strictly pathognomonic* of the disease." Here the cells are com-

pletely filled with fluid, and as no air can enter them percussion is flat, and at the roots of the lungs the bronchial or tubal respiration is heard with great distinctness. Bronchophony or the bronchial resonance of the voice accompanies the bronchial respiration. Around the engorged portions of the lung a modified crepitant rhoncus may usually be heard, especially if the patient coughs or is directed to make very full respirations.

In the third stage of the disease the cells are so solidified that percussion is perfectly flat, and the bronchial respiration and resonance are either absent or very imperfectly heard. There may still be heard, in very strong inspirations, a decided crepitant rhoncus; but this is rather owing to a portion of the lung which remains in the first or second stage, and admits the air in very strong inspirations.

If an abscess has been formed, of course the percussion still remains as in the third stage; but by applying the ear over it, the air is heard to gurgle through the accumulated pus.

The following instructive table of the physical signs of pneumonia is copied from Dr. Gerhard's excellent work upon the Diseases of the Chest. A slight examination of this ingenious table at once makes us familiar with the prominent physical signs of pneumonia in all of its stages:

First stage, or engorgement.	Rude or harsh respiration; crepitant rhoncus.	Percussion clear, or nearly so.
Second stage, or hepatisation.	Bronchial respiration; bronchophony; crepitant rhoncus around it.	Percussion flat, or very dull.
Third stage, or purulent infiltration.	Bronchial respiration in large tubes, feeble or absent elsewhere; mucous and sub-crepitant rhoncus; bronchophony imperfect.	Percussion flat.
Fourth stage, or abscess.	Cavernous respiration, gurgling.	Percussion flat.

Several of the stages of pneumonia may exist in the lung at the same time, and may be readily detected by auscultation and percussion, nor does this require any very great skill on the part of the practitioner.

In convalescence the greatest caution is to be observed to guard the patient against relapses, which are very frequent. Although the strength returns rapidly, even after the most active treatment, we should not prematurely permit a return to accustomed diet and habits. When recovery takes place, as we would naturally suppose, the physical signs gradually retrace their steps until the gentle vesicular murmur is heard; but so *long as the* percussion is dull, or the crepitant *rhoncus exists, danger still threatens.* The subsidence of the general

symptoms in recoveries from sthenic pneumonia is generally quite rapid.

The duration of the disease, in mild cases, is from ten to fifteen days; but if it has reached the third stage, it is much longer. All complications, such as pleurisy, typhoid condition, &c., of course retard recovery. When the termination of the disorder is fatal, death usually occurs from seven to fourteen days from the beginning of the attack.

Diagnosis.—Under this head little need be said, for the preceding description of the general and local signs of the disease sufficiently characterizes it. The rusty sputum, when it is present, and it generally is, Andral and all of the best authorities think, at once distinguished it from simple bronchitis, in which the expectoration is glairy. In cases of pneumonia the patient is almost invariably ill and confined to bed, whereas this is by no means necessarily the case with bronchitis. The crepitant rhoncus, in conjunction with general symptoms, may be safely depended upon, for its presence is more constant and its extent and progress well represent the amount and state of disease. Increasing dullness upon percussion, with the bronchial respiration and bronchophony, mark unerringly its transition to the second stage. From pleuritis it may be distinguished by the intense sharpness of pleuritic pain, by the physical signs which have already been specified, and by the admeasurement of the thorax. But that bronchitis and pleuritis are frequent concomitants of pneumonic inflammation, must not for a moment be lost sight of by the practical physician; but they usually develope themselves in succession. The history and general symptoms of pulmonary apoplexy, œdema of the lungs, and tuberculous developments, independent of their peculiar physical signs, will distinguish them from pneumonia.

Prognosis.—Dr. Williams properly observes, that pneumonia must at all times be viewed as a serious disease, and the prognosis, even in favourable cases, should be given with caution, as cases which are at first slight may take an unfavourable turn, and in progress towards recovery, as long as the disease lasts, there is a chance of relapse, which may throw the patient into new danger. In the first stage of the disease, if the inflammation be not very extensive, we may expect a favourable termination; but if both lungs are extensively affected, the result may be fatal, especially if accompanied by adynamic fever. The tendency of the disease, in its progress, is to disorganization of the pulmonic structure; therefore its continuance increases the danger by running into the second or third stage. Recovery may take place *from every stage of* pneumonia, but the chances of this are remote if

suppuration has occurred; and even hepatisation requires much time for the absorption of the effused lymph. In epidemic pneumonia typhoides, the prognosis is always to be cautious, for it is an awfully fatal disease, even under the most judicious management. If the inflammation is seated in the upper lobes of the lungs, it is more dangerous than in the lower lobes. The fatality is greater among the lower classes of society, who are intemperate, irregularly fed and badly clothed, thereby diminishing the general health and vigor of the system. For these reasons the disease is peculiarly fatal with emigrants and with our negroes. For obvious reasons, young persons recover more readily and much more rapidly than old ones.

Treatment.—The difficulties in the management of pneumonia are confessedly very great, for not only does it vary in the different stages, but the type and the numerous complications increase them to a most perplexing extent. Irritation of the parenchyma, or even slight congestion, accompanied by puerile respiration, may be removed by a purgative and counter-irritants; but if a decidedly inflammatory action has set in, this simple treatment is worse than useless.

In the first stage of sthenic pneumonia, when the blood vessels of the lung are engorged and inflamed, all of the best authorities agree upon the propriety of free venesection. The patient should be placed in a sitting posture, and then the bleeding should be full and decisive from a large orifice. Such a blood-letting will often arrest the progress of the disease, the authority of the justly celebrated M. Louis to the contrary, notwithstanding, for he evidently confounds the typhoid with the frank form of this affection. The blood should flow freely, until a decided impression has been made upon the circulation and upon the patient's system; and if he be plethoric, the headache intense, or the dyspnœa urgent, push the bleeding to the verge of syncope. If the blood is buffy, with a firm crassamentum, if the surface is dry and hot, if headache and dyspnœa return, or if the gastric derangement is great, the venesection may be repeated. The celebrated Dr. Gregory, of Edinburgh, relied almost exclusively upon large and repeated bleedings, but it was observed that his patients recovered very slowly. The abstraction of blood by venesection will be effectual in proportion as it is resorted to early in the attack, before the spongy structure of the lung becomes obliterated by effused lymph. I would not be understood as condemning a resort to the lancet even in the second stage of the disease, but here it must be used with more caution. There is no remedy which more readily promotes the absorption of the effused lymph in the second stage of pulmonary inflammation

than judicious bleeding, but here it must not be pushed too far for fear of making too great an impression upon the general system.

Bouilland has revived the old French hospital system of small bleedings, frequently repeated for several days. With such a system as this, it is not wonderful that Louis comes to the conclusion that early blood-letting never arrests the disease(!), and only shortens its duration four or five days. Dr. Stokes, one of the physicians of the Meath Hospital, Dublin, relies more upon local than general blood-letting; but it is fair to conclude that the disease in such an institution is generally of an asthenic character. But Bouilland, Louis and Stokes are heroes in blood-letting, compared with many physicians of the present time, who, if I am correctly informed, bleed in no form of pneumonic inflammation, either generally or locally! But as inefficient as this practice may be, it is less dangerous to life than resorting to stimulants in the first and second stages of pneumonia; for in the first instance nature may effect a cure, but in the other the most serious injury is done by stimulating the circulation, which it should be our object to diminish, if the disease be really inflammatory, as every one admits whose opinion is worthy of respect.

When general blood-letting becomes inadmissible or injurious, topical bleedings may be resorted to with the greatest benefit. Leeches and cups not only relieve the engorged capillaries, but act as revulsives. When cups are used they may be applied freely between the shoulders, and especially posteriorly over the base of the inflamed lung. From six to twelve should be applied at once. Leeches should be applied on the anterior part of the chest, immediately over the inflamed portion of lung, nor should they be sparingly put on, for local depletion is notoriously less exhausting than general bleeding, and its power of subduing, what may be termed sidual residual inflammation, is most astonishing.

Although a strenuous advocate for blood-letting in the beginning of acute pneumonia, and believing this valuable curative means too much neglected by timid practitioners, yet I would be cautious not to push it to the imprudent extent which Dr. Rush and his disciples did; but I can perceive no reason why acute inflammation of the lungs should not require the same depletory measures as inflammation of any of the other organs. When the disease is epidemic, or occurs in crowded hospitals or factories, or is of the typhoid type, or is engrafted on a cachetic habit, then blood-letting is to be resorted to with circumspection.

The contra-stimulant practice of Rasori, and other Italian physicians, is acknowledged to be most efficacious in the diseases of the *chest; and in every form* of pneumonia is esteemed by Laennec even

superior to blood-letting. This method consists in giving large doses of tartarized antimony frequently repeated. The power which the antimony possesses of controlling the pulse is truly wonderful, but not more astonishing than the quantity of this active medicine which the stomach may be made to tolerate. The British physicians prescribe the solid tartar-emetic, but I am sure its effect, as an antiphlogistic, is greatly increased by dilution. The following formula of the French hospitals is a convenient one:

℞. Antimonii et potassæ tartratis, gr. vj.
Aquæ menthæ, ℥vj.
Pulveris acaciæ, ʒij. M.

During the first day give a table spoonful (gr. ½) of the above mixture every other hour. The three or four first doses may vomit or purge severely; but after awhile tolerance of the medicine is established, and then the dose may be increased, not only with impunity, but to the decided comfort of the patient. If inconvenient purging follows the use of tartar-emetic, a few drops of laudanum checks it. As the symptoms of the disease decline so should the dose of the antimony be diminished. Broussais supposed that this remedy acts by pustulating the mucous membrane of the stomach and intestines, but this does not accord with the observations of Graves and Stokes, who have paid much attention to the subject. Nor does its antiphlogistic power depend always upon its emetic, purgative or diaphoretic properties, for it is often successful where none of these effects have been produced. To say that it has a specific effect upon the pulmonary capillaries, is not a very intelligible explanation, but I have none other to suggest.

After blood-letting and the contra-stimulant treatment, the exhibition of mercury is often very efficacious, especially in the second and third stages of pneumonia; indeed, a mercurial purge, say twenty grains of calomel, is often most signally beneficial as an antiphlogistic during the first stage of the disease. Its powers are most clearly manifested when given to the extent of affecting the gums, though it is seldom necessary to push it to full ptyalism. To prevent calomel or hydrarg. c. cretâ from running off by the bowels, it is customary to combine a small quantity of opium with them. Mercury is more gradual in its operation on the system than the remedies which have heretofore been mentioned, but its effects are more permanent. The addition of minute quantities of ipecacuanha to the mercury and opium is highly beneficial. This combination, as an anodyne, in allaying the pain and cough, and as a sedative in quieting nervous irritability, is

extremely useful. The following combination I have seen used with the happiest results:

℞. Hydrargyri cum creta, ℈j.
Opii et
Pulveris ipecacuanha, ana, gr. iv.
Syrupi, q. s. ut fiat massa, in pil. xij. dividenda.

A pill to be given every alternate hour or every third hour, according to the condition of the individual case. In the pneumonia of children, or lobular pneumonia, I have invariably found mercury useful in promoting absorption of the deposited lymph. Mercury is not only antiphlogistic, and an active promoter of absorption, but it is antiplastic, a fact which should never be lost sight of.

Eupatorium, senega, sanguinaria and scilla maratima are valuable expectorants in the treatment. An infusion of ℥ss. of eupatorium and ʒij. of senega, in a pint of boiling water, of which a tablespoonful may be taken every hour, often acts well towards the close of the disease, and particularly so if the patient be aged, or if much bronchitis has accompanied the attack. The syrups of squills and ipecacuanha combined are good expectorants in the cases of children.

After the reduction of active inflammation, counter-irritation may be resorted to very beneficially in the form of tartar-emetic ointment, croton oil, or blisters. In the treatment of the second and third stages, and throughout the typhoid disease, the efficacy of blistering cannot be questioned. The blisters should be frequently repeated, but never of very large size, as recommended by Dr. Gerhard.

Some people will have it that there is such a disease as intermittent pneumonia, which may be cured by large doses of quinine, or bark and wine, or by arsenical solution. I have never observed any such disease, nor do I believe such a thing as intermittent pneumonic inflammation ever exists.

The treatment of the chronic forms of pneumonia will readily suggest itself to the intelligent practitioner.

ART. VII.—*Clinical Reports of the College Infirmary, Richmond.* By B. ST. GEORGE PEACHY, M. D., Resident Physician.

[We are glad to be able to inform the friends of this institution that it is in a most prosperous condition, and now undoubtedly furnishes the best field for clinical observation which our State affords. During the past winter the wards have been constantly filled; the number of applicants for surgical relief, especially, have been very numerous. It is almost superfluous to point out the advantages resulting to a Medical School from a connection with an institution of this character, where the different varieties of diseases and injuries are presented for the student's observation at every interval of leisure, and he daily sees applications of the precepts he has received in wards adjoining his lecture room.—EDS.]

CASE I. *Encysted Tumour—Meliceris;* (Under the care of Dr. JOHNSON.)—Booker, a negro boy, aged ten years, had always enjoyed good general health. About four months since a small tumour made its appearance on the left breast beneath the clavicle, and gradually increased to its present dimensions. The appearance of the tumour was smooth and uniformly rounded; to the touch it imparted an indistinct sense of fluctuation; it was but slightly movable, being bound down by fascia; its diameter was about three inches. An operation for its removal being demanded, the patient was placed under the influence of chloroform, and an incision was made in the direction of the muscular fibres and the integument was dissected up so as not to destroy the integuity of the cyst. The softness and apparently deep attachment of the tumour, situated as it was, in close neighbourhood to large blood vessels and nerves, and the altered relations of these important parts produced by the expanded tumour, demanded the utmost caution and coolness on the part of the operator. A further dissection revealed what it was warrantable to infer from the above characteristics. The seat of the tumour was found to be of deeper origin, it had dissected its way beneath the pectoralis major, was partially attached to the upper edge of the pectoralis minor, and lastly formed close adhesions to the ribs and intercostal spaces. The numerous and deep attachments of this tumour are what render an accurate account of it interesting. First, the superficial fascia of the chest covering it was much thickened, and bound it closely down. Secondly, further dissection discovered a firm adhesion to the upper edge of sternal and lower edge of the clavicular portions of the pectoralis major. Thirdly, tracing it still further downwards, it was found to extend to the ribs and intercostal spaces and finally to the upper edge of the pectoralis minor, under which it passed. Above it extended to the subclavius muscle which alone separated it from the subclavian artery, whose pulsations could be easily and distinctly felt. *From all these* attachments it was severed, and

upon examination proved to be an encysted meliceris, containing about four ounces of the peculiar semi-fluid substance which characterizes such tumours, and whence they derive their name. The flaps were brought together by sutures and adhesive strips, light, water dressing applied, and bandages encircled the thorax. The patient recovered with full power and use of the pectoral muscles, and rejoiced to be rid of so painful and inconvenient a companion as was this tumour.

CASE II. *Osteo-sarcoma of the lower jaw;* (Under the care of Dr. GIBSON.)—The patient was admitted into Infirmary, February 2d, 1853. In giving a commemorative history of her case, she said that some eight months ago she experienced much soreness about the gums, which were very red and swollen, and continued to increase rapidly in size. The tumour at the time of entrance was extremely red and mottled; highly injected vessels shot over its superficies in all directions, anastomosing and again assuming an arborescent form. The teeth (two canine and four incisor) seemed uplifted from their sockets and imbedded in the substance of the tumour. The tumour occupied the portion of the body of the bone included between the first bicuspid teeth. Just behind the teeth the tumour was surmounted by two highly vascular fungoid growths, which projected to such an extent from the bone as nearly to prevent closure of the lips. An operation being demanded, Dr. Gibson made an incision from the centre of the lower lip to half an inch below the symphysis menti. The flaps were dissected off and the bone was divided by the metacarpal saw between the first and second bicuspid teeth on either side. The last step was to cut through the anterior attachment of the tongue, which might probably be attended with a retraction of that organ into the pharynx. No such effect however ensued, and the whole tumour was removed with entire success. The lateral attachment of the tongue to the body of the bone left on both sides, probably prevented the occurrence of the accident above mentioned. The edges of the wound were brought together by sutures. A hare lip needle was used at the superior portion of the incision, in order to cause more firm adhesion and prevent the existence of a fissure after reunion. The process of healing advanced rapidly, a slight cicatrix only remains; there has been no appreciable approximation of the bony edges, and from present appearances we have reasons to expect that the intermediate space will ere long be filled up with callus, and that an almost entire symmetry will prevail where a most disfiguring tumour once existed.

CASE III. *Spina Ventosa of the lower jaw;* (Under the care of Dr. GIBSON.)—Prince, a negro boy from Essex, Virginia, aged 14, presented himself for operation in February. A large tumour was developed upon the right side of the face, producing great inconvenience and interfering with articulation. The tumour involved the inferior maxilla from its articulation to the first bicuspid tooth. The teeth between these points were gone. The growth of the tumour for some months previous had been more rapid than at first. The characteristics were such as to lead to the diagnosis of spina ventosa, which inspection after removal verified. An incision was made from the *point of articulation* to near the angle of the bone, thence to within

half an inch of the angle of the mouth. The tissues were dissected from the bone and resection with chain saw practiced at the space occupied by the canine tooth, which was previously extracted. The sawn end of bone was then grasped, and further dissection of the tissues on its inner aspect carried on up to the point of articulation. The bone was then disarticulated, and the whole tumour removed, without injury to any large artery near the condyle. The edges were brought together with sutures and adhesive strips, and cold water dressing was employed. Nearly the whole line of incision healed by first intention, and the patient in the course of two or three weeks was discharged with decidedly a more comely appearance than was presented on his entrance. In this operation, as in all similar ones practiced upon this part of the face, the facial nerve was severed, and after entire union of the wound signs of paralysis of that nerve were very apparent, such as falling of the lower eye-lid and retraction of the mouth towards the sound side. Since his return home his condition has still more improved, and connexion between the cut edges of nerve has been re-established; nervous power is now transmitted to the parts supplied by the facial nerve, and the usual balance between the muscles of both sides is restored.

Case IV. *Spina Ventosa of the lower jaw;* (Under the care of Dr. Gibson.)—Lucretia, from Albemarle, Va., negro girl, aged 10, entered the Infirmary in December 1852, presenting an appearance very similar to that of Prince, and an examination of the tumour warranted a similar diagnosis. The operation was the same as that above described, and its result as successful. In a fortnight union had taken place save at one or two small points through which ligatures passed, and the little girl was running about cheerfully, and able to use the remaining portion of her jaw with perfect convenience. Judging from the happy results attending Prince's case, we may venture the hope that in the course of a year a similar report of restoration of nervous power, will be made concerning Lucretia, which, when received, shall be forthwith forwarded to this Journal.

Case V. *Foreign body in the Trachea—Tracheotomy;* (Under the care of Dr. Johnson.)—R. S., of Powhatan county, Virginia, aged 8, while running with a grain of corn in his mouth managed to get it jostled into the larynx, whence it fell into the trachea, and finally lodged at the bifurcation of the bronchi. At this point it remained for ten days before the patient was brought to the Infirmary. At the time of entrance he appeared much distressed and uneasy, felt sore all along the trachea, and disposed "to cough out something in his throat." When the patient was directed to cough, the foreign body was distinctly felt to strike against the sides of the larynx and trachea. It was determined to place the patient under the influence of chloroform and to perform tracheotomy. An incision was made in the medium line; the fascia was cautiously dissected from the trachea before incising the latter, inasmuch as an incision made directly through both would have been attended with escape of air, which finding its way into the cut arcolar tissue would have given rise to emphysema, an occurrence *zealously to be guarded* against. The slight hæmorrhage

having been arrested, the trachea was next incised to the extent of some five or six rings. The irritation occasioned by the entrance of air through this opening caused the most violent heaving of the chest. The face at times was perfectly livid. This lasted several minutes, and comparative quiet seemed to be restored. As soon as blunt hooks were introduced to expand the wound and allow extrication of the foreign body, the spasmodic efforts would recur and prevent their insertion. Having once succeeded however in dilating the incision, a violent fit of coughing expelled the grain of corn, and all irritation at once subsided. The edges of incision were brought together by Liston's adhesive strips and cold water applied. With the exception of a considerable fever the night subsequent to the operation, and some excitement and heat of skin for a day or two after, the patient suffered not, but recovered entirely and was discharged in less than a fortnight.

Ordered during fever a teaspoonful every two hours of the following mixture:

℞. Scillæ syr., ʒj.
Vini antim, ℥ss.
Tolutani syr., ʒij.
M. Ft mistura.

MEDICO-CHIRURGICAL SOCIETY OF RICHMOND.

TUESDAY, MARCH 1ST. DR. SNEAD IN THE CHAIR.

The ballot for candidates for membership being in order, Dr. H. L. Thomas was unanimously elected a member of the society.

The chairman continued the proceedings by calling upon the members individually for communications.

Dr. Otis, being called upon, presented a specimen of pericarditis occurring in a child four years and seven months of age, which, he remarked, was a somewhat rare case of disease, since Rilliet and Barthez mention that they have met with inflammation of the pericardium only once in children under six years of age, while Billard could find traces of it in but seven out of 700 autopsies. The history of this case is very imperfect. The child, a little negro boy of remarkable intelligence, belonged to a strumous family, and is represented by his parents as having been sickly from infancy. One month since, he had an attack of intermittent fever, from which he soon recovered under the ordinary treatment. Last night (Feb. 28th) he was again taken sick, and a physician being sent for, found him feverish and complaining of pain in the right side of the abdomen. During the night convulsions supervened, and the child died.

The autopsy was made twelve hours after death. The lower limbs were œdematous, the abdomen contained a large quantity of serum, the liver was enormously enlarged, and blood poured from it when it was incised; the remaining abdominal viscera, and the peritoneum, were healthy. Both lungs abounded in tubercles, and in the right upper lobe there were several large cavities. The pleuræ were adherent throughout almost their whole extent. The bronchial glands were greatly enlarged; one, in particular, was of the size of a pigeon's egg, and being in immediate relation with the base of the heart, might very well have been a cause of irritation to the investing membrane. Some of the glands were filled with pus, others with a caseous matter, while those of smaller size were hard and crude. The pericardium was distended by true pus, without the slightest serous or sero-sanguinolent admixture. The surface of the heart and of the sac were covered with flakes and filaments of a yellowish white lymph, presenting a shaggy and floculent appearance, like shreds of wet tow. In two spots the pericardium was adherent; the false-membrane was very thick in these places, and of demi-cartilaginous hardness.

Dr. Parker, when called upon, detailed a fatal case of disease, during the course of which he could detect nothing but nervous disorder.

Dr. Bolton discussed the case just reported, and alluded to the difficulty so often encountered in the diagnosis of affections of the nervous system. He *recollected an instance* of supposed hysteria, where

paralysis subsequently supervened, in which an autopsy revealed extensive cerebral softening.

Dr. Deane presented a human ovum of the tenth week, enclosed in its membranes.

Dr. Bolton communicated a case of suspected poison by arsenic, in which the chemical analysis was conducted by Dr. Lewis and himself. (We are indebted to Dr. B. for the following particulars of the case.) Col. ———, of Louisa, while eating ice-cream, *perceived a peculiar taste,** which aroused his suspicion and alarm. He took an emetic and was attacked shortly afterwards by violent vomiting and purging. Under the care of Dr. Atkinson, of Henrico, he gradually recovered from the more alarming symptoms of poisoning, but was long debilitated, and his health was not completely restored until after a season at the mineral springs. Not having seen the physician in attendance, these general statements, derived from the patient's friends, were all that were in Dr. Bolton's possession.

The glass of ice-cream of which the patient had partaken was examined, and after it had melted, a white powder was observed at the bottom. This powder was dried and sent to Dr. Bolton for analysis. 1. A small portion of the powder was put in a reduction tube, carefully cleaned, and was covered with fragments of charcoal; upon being heated by a spirit lamp, a whitish ring was formed, then a broad ring with a distinct metallic lustre. 2. The same experiment was repeated with a different flux. 3. Some white particles were picked from the powder and placed upon a glass plate, and evaporated with an odour resembling phosphorus. 4. Similar particles were dissolved in boiling distilled water; solution of nitrate of silver had no effect; on adding ammonia, an abundant canary-yellow precipitate took place. 5. The same solution was treated with the ammonio-sulphate of copper, and an abundant green precipitate was the result. This showed that the preceding reaction was not caused by phosphoric acid. 6. Marsh's process was now employed. Hydrogen was evolved from an apparatus containing rain-water, sulphuric acid, and granulated zinc. A piece of white porcelain was exposed to the gas without acquiring the slightest stain. A solution in boiling distilled water of the ring procured by the reduction process, was then added to the apparatus, and numerous distinct deposits were procured upon a slip of glass and upon a piece of white porcelain. 7. Reinsch's test was next tried. A solution of the powder was placed in a clean test-tube and one-sixth part of muriatic acid was added; clean slips of bright copper foil were introduced. Upon boiling, a copious grey coating of the metallic surface took place. 8. A slip of copper, thus coated, was gently heated, and a sublimate was obtained. This was treated with ammonio-nitrate of silver, and ammonio-sulphate of copper, and the characteristic reactions of arsenic with these tests ensued. 10. A solution of the powder when treated with hydro-sulphuric acid, threw down the rich golden sesqui-sulphuret of arsenic. 11. (*Quantitative analysis.*) One grain of the powder, which was apparently composed of a white mineral pulverulent substance, mixed with a coarse powder like bran or

* Many toxicologists deny the assertion of Orfila in regard to the taste of *arsenious acid.*

corn meal, was dissolved in boiling distilled water. This was precipitated by sulphuretted-hydrogen, and re-dissolved, to purify it, by ammonia, and again precipitated by hydrochloric acid. The precipitate was carefully weighed, and amounted to one grain—equivalent to four-fifths of a grain of arsenious acid. 13. (*Microscopical analysis.*) The ring procured by the reduction process exhibited, under the microscope, octohedra of arsenious acid.

Notwithstanding the conclusive nature of this evidence, the examining court before whom the negro, suspected of perpetrating the crime was arraigned, found no cause for trial, and he was accordingly sold and sent to the South.

Dr. Snead reported a case of *Trismus nascentium*, remarkable for its long duration. The patient was a negro child, nine days old. Dr. Snead learned that upon the previous day the child had refused to take the breast, and that the mother had observed a convulsive movement of the hands. At that time the whole muscular system was in a state of remarkable rigidity. The head bent back; the hands clenched; the lower jaw fixed; and the feet forcibly flexed. It was observed that the wound caused by the division of the cord was still open and inflamed.

A large mercurial purgative was administered, and calomel was afterwards given in small doses. The next day no change was visible, and opium was ordered at short intervals. This treatment was continued ineffectually for two days. At the close of the third day the child appeared very slightly narcotized, but no relaxation had occurred. The opiate plan was persisted in, every other day a drastic purge being administered. The child died on the eighteenth day, apparently from exhaustion.

Dr. Gooch called the attention of the society to the prevailing epidemic of pneumonia, and wished to enquire if the disease was in reality extensively prevalent, and of a very fatal character.

Dr. Bolton had not met with a single case of pneumonia this winter in which he felt justified in using the lancet—there appeared to be a decided downward tendency in the disease.

Dr. McCaw adverted to the fact that a delirium was present in many cases during this epidemic, which might be confounded with delirium tremens. He also referred to the difference of constitution in the white and negro; the latter appeared to manifest, in his opinion, less power of resistance to affections of the lungs. Among negroes, he had been compelled to use quinine and stimulants, in most cases, almost from the beginning of attacks of pneumonia.

The society then proceeded to elect delegates to the American Medical Association. The following gentlemen were chosen: Dr. Dove, President, Drs. Bolton, McCaw, Otis, and Lewis.

The society then adjourned.

CHRONICLE OF MEDICAL SCIENCE.

ANATOMY, PHYSIOLOGY, AND ORGANIC CHEMISTRY.

1. *Spiral Structure of Muscle.* By MARTIN BARRY, M. D., F. R. S.

[Dr. Barry has renewed his examinations upon the structure of muscle, and after nine months of more rigid investigation, he says, that so far from giving up his original views, he is even more confirmed in the opinion that the structure of muscle is no other than spiral. He has met with unexpected states of interlacement throwing new light upon the whole, and now understands how it was that observers did not see what he has seen. His double spiral fibril appeared to most observers too complicated, perhaps too artificial. Now, however, having found and figured transition stages extending to complete relaxation, he hopes that there will be some at least disposed to repeat their examinations, and with more minuteness than before. The objects are of extreme minuteness, requiring, almost without exception, the highest magnifying powers; and they are optically so complicated, that nowhere in the field of microscopic observation is there a subject more difficult than that of muscle. These renewed examinations of muscle were made in the house of the veteran Purkinje, whose judgment in the matter may be inferred, when it is stated that he translated an account of the same into German.]

The principal facts made known by the author, briefly recapitulated, are these:—"The muscular fibril consists of two spiral threads, so interlaced as to present a double cylinder, *i. e.*, the fibril appears as if grooved on each side, a transverse section of the fibril being represented by the figure (∞). The fibril of a primitive fasciculus having transverse striæ is usually so situated, that one of its edges is directed towards the eye of the observer; whence it comes that usually there is seen the spiral of only one of the cylinders of the fibril. A muscle is thus nothing less than a vast bundle of spirals, appearing short and thick in contraction, long and thin in relaxation. The elliptical winds of the spirals appear to have been mistaken by some observers for 'beads,' 'segments,' or 'particles.' The dark *longitudinal* striæ of the primitive fasciculus are spaces (probably occupied by a lubricating fluid) between the edges of the fibrils. The dark *transverse* striæ are rows of spaces between the winds of the spiral threads constituting the fibrils. If the dark longitudinal striæ are the spaces between the edges of the fibrils, the light longitudinal striæ are the edges themselves of the fibrils; and if the dark transverse striæ are rows of spaces *between the curves of* spiral threads, the light transverse striæ are of

course the visible portions themselves of these spiral threads. The contraction of muscle does not require a flattening of 'segments' or 'particles,' as supposed by some, but simply a more transverse direction of the spirals in their curves. Hence, in contraction, the striæ of a fasciculus are narrow, and in relaxation they are broad, denoting a shortening and lengthening respectively of the fibrils. 'Transverse cleavage' of the primitive fasciculus is caused by the spirals giving way at that part where they offer the least resistance, viz., at the part where they cross one another and are in contact. The sarcolemma arises from the coalescence of spirals.

"It was by attending to the history of development of muscle, chiefly in the larva of the large toad of Jersey, that the author arrived at a knowledge of the foregoing facts. His observations, published in the present paper, were made with one of the large compound microscopes of Plössl; and it happened that the instrument was the very last constructed by that justly-renowned optician. The following are some of the new facts herewith observed; others will be mentioned further on.

"The two spirals, of which the muscular fibril consists, run in the same direction, and not in opposite directions, as the author first supposed. The two spirals are so arranged, that the adjoining coils of each run within the coils of the other.

"These two spirals are united at the end of the fibril, as in a loop. Such at least is the case in one form of muscle, and, from analogy, it may be presumed to be the same in others.

"The fibril, being thus a double or twin spiral, undergoes a stronger twisting in contraction, and an untwisting in relaxation.

"When met with in relaxation, the two spirals usually present themselves in a state comparable to that of common twine.

"Between the untwisting in relaxation, and the twisting in contraction, there are several intermediate states.

"Cilia, also, are double spiral threads, and thus have a structure like that of the muscular fibril."

Edinburgh Med. and Surg. Journal, Jan. 1853.

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2. *Anatomy of the Male Mammary Gland.* By Professor Luschka.

The *situation* of the *nipple* is by no means quite constant, although it is generally used as a fixed point in the physical examination of the chest. Among 60 cases, it was 44 times in the space between the fourth and fifth ribs, 6 times upon the fifth rib, 8 times on the fourth rib, twice between the fifth and sixth ribs. Not rarely it was different on both sides. The average distance from the margin of the sternum is about 4¾ inches, but it is sometimes half-an-inch less. Concerning the *contents* and *structure*, Luschka has frequently squeezed out from the nipple a fluid, clear like water, containing (1) molecular granules, (2) roundish globules, 0·004 to 6·006mm. in size (composed of small granules), and (3) spherical pale cells, as large as 0·012mm. with an excentrical nucleus, in form and appearance like the granular globules just mentioned. *The areola and* the nipple itself are endowed with

sebiparous glands and numerous *papillæ*, as well simple as compound ones, in which the minute blood vessels frequently form spiral slings, which might be mistaken for terminating slings of the nerve-tubes, but he could not find anything like Wagner's corpuscula tactus. As well in the nipple as in the areola Luschka met with many organic muscular fibres, such as Kölliker describes, in the female breast. The *parenchyma* of the male mammary gland is very scarce; it appears as a white fibrous mass, without showing any arrangement into lobules; it contains now and then a few small miliary vesicles, which are sometimes a little larger, and show more the form of a bag about 1·0mm. broad, and 2 to 4mm. long, ending in the nipple.

Medico-Chirurgical Review.

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3. *On the Reproduction of Nervous Substance.* By Dr. A. Waller.

Dr. Waller, after having made many experiments on different animals, principally warm-blooded ones, of an early age, and frogs, considers himself entitled to the conclusion: "That the old fibres of a divided nerve never gain anew their original structure and function, and that the reproduction of nervous substance does not take place merely in the cicatrix itself, but also downwards into the terminating ramifications. The *old* fibres gradually waste, and after a month or later, *new* fibres are formed, which are pale and transparent, possess no double contour, present a very unequal diameter, being on the one place very thin, on the other, varicose, like the fibres of the spinal marrow. In the peripheral part of the glosso-pharyngeal nerve of a frog, three months after the section, their size was only about one-sixth to one-third of the original fibres; they resembled, therefore, much more the ramifications of the nerve in very young frogs. In the central part of the cut nerve the fibres remain unaltered. Concentrated acetic acid dissolves the membrane of the newly-formed fibres, leaving fusiform nuclei; the membranes of the original fibres are completely dissolved, no nuclei being left. The reproduction of fibres, and the return of function, proceed in the same proportion."

Medico-Chirurgical Review.

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4. *Upon the Elective Elimination of certain substances by the Secretions, particularly by the Saliva.* By M. Claude Bernard.

M. Bernard observes that the researches made by physiologists in regard to the absorption and elimination of medicines, have been confined chiefly to the urine, the bile, and the milk, while other secretions, especially that of the saliva, have passed unnoticed. Accordingly, the singular property, possessed by the salivary glands, of passing certain substances into their secretion, and rejecting other substances equally soluble, and which are readily eliminated by the other secretions, has remained unnoticed.

The substances upon which M. Bernard has experimented are the

iodide of potassium, the iodide of iron, the lactate of iron, cane and grape sugar, and the yellow prussiate of potash.

The following are the conclusions at which he has arrived: That these soluble substances, which circulate in the economy harmlessly, offer two orders of remarkable phenomena. 1. Some substances never enter the salivary secretion; for example, the prussiate of potash, cane and grape sugar. Others, on the contrary, show themselves in all the secretions, only with greater or less rapidity; for example, the iodide of potassium, which is found in the saliva immediately after it is injected into the vein, but requires more than an hour to make its appearance in the urine, unless a great quantity be injected. 2. Certain substances are rapidly eliminated by the urine, as sugar and prussiate of potash, while others can remain in the economy, and continue to appear, for a length of time, in the other secretions. The iodide of potassium offers a remarkable example of this prolonged detention of soluble matters in the organism; a detention which is greater in the case of this salt, because that portion eliminated by the saliva is usually returned by swallowing to the stomach, to be again absorbed by the blood, and again mingled with the saliva. But the principal conclusion to be derived from these experiments is, that the behaviour of substances in the economy is subject to no general law. Experiments made upon one salt, teach us nothing in regard to others. We could not have foreseen, for example, that the equally soluble salts, iodide of potassium and ferrocyanide of potassium, would present such striking diversities in the modes of their elimination. Special researches in regard to each substance are then necessary to establish its physiological history, which is necessarily intimately connected with its therapeutical mode of action.

Archives Générales, (Jan. 1853.)

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5. *Analysis of the Sweat.* By M. Favre.

At the meeting of the Academy of Medicine of Paris upon November 15th, M. Favre communicated his researches upon the composition of the perspiration.

The analyses, the results of which are stated by M. Favre, were made upon very considerable quantities of sweat, collected with such precautions as to ensure the absence of foreign matters, or of any alteration in the liquid itself. The whole quantity of sweat employed in a series of experiments was not less than eight gallons.

In collecting the perspiration, it was found that of two quarts, for example, the first third was always acid, the next neutral or alkaline, and the third always alkaline. The odour was slight and not disagreeable, nor did it recall the repulsive smell of butyric acid, or of the volatile acids which always exhale from sweat that has undergone fermentation. It was observed that the acid portion of the liquid soon lost its acid reaction. Among other matters, M. Favre recognized the existence in the sweat of two organic acids combined with soda and a little potash. The first is lactic acid; the second, which has only been analysed *in combination with silver*, has no properties in common with

other acids. M. Favre proposes to designate it as *hydrotic acid* (from ὑδρως, sweat.)

The following is the results of an analysis of 10,000 grains:

	For 10,000 grains.
Chloride of sodium,	gr. 22.305
Iodide of potassium,	2.437
Alkaline sulphates,	0.115
" phosphates,	trace.
Earthy "	"
Salts of lime,	"
Alkaline albuminates,	0.040
Epethelial debris,	trace.
Lactates of soda and of potash,	3.171
Hidrodates " " "	15.623
Urea,	0.428
Fatty matters,	0.136
Water,	9.955.733
	10.000.000

In comparing this constitution of the sweat with that of other secretions, we observe that common salt is the preponderating mineral constituent, as is the case in the urine; it is different with the sulphates, which are far more abundant in the urine than in the sweat. This is apparent upon comparing equal weights of urine and sweat taken from the same individual at the same period.

	Sweat.	Urine.
Chlorides,	gr. 34.639	57.018
Sulphates,	0.160	21.709
Phosphates,	trace.	5.381

It appears from these facts that the mineral salts are not indiscriminately eliminated from the economy.

Bulletin de l'Académie.

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6. *Phlebolithes from a Horse.*

Mr. Simmons showed three large phlebolithes taken from the external jugular vein of a horse, which had prevented the blood from entering the vein, and therefore caused the contraction of the vessel. There was also a diseased condition of the liver in the same animal. The specimen was accompanied by coloured drawings of the morbid parts.

Dr. Crisp believed that phlebolithes were generally met with in the human subject, and especially in women, in the pelvic veins, as those vessels were more liable to encounter impediments to their circulation by external pressure, and so to permit the formation of thick concretions, than the veins in other parts. He considered that, in the specimen exhibited by Mr. Simmons, the vein first, from some cause or other, became contracted, and subsequently the formation of the phlebolithes ensued.

Mr. Simon was disposed to regard the phlebolithes as a cause, and not as a consequence, of the contraction of the vein. He considered that the entrance of the blood was prevented by their formation, and that the result of this obstruction was the contraction of the vessel.

Transactions of Path. Soc. of London.

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7. *Absence of Fibrin in the Blood.*

A singular case of *purpura hæmorrhagica* lately occurred in the wards of M. Hérard of La Pitiè. The patient was 35 years of age, a gilder by profession. His general health was good; his constitution was strong; his temperament sanguine; he had recovered a fortnight since from an erysipelas of the face, which had presented nothing unusual in its progress and symptoms. On the 19th of August, after a cold bath, he had a chill, followed by fever, headache, and violent pain in the loins. The 20th and 21st the disease augmented; the patient had nausea and vomiting. The 22nd he went on foot to the hospital La Pitiè, where he was admitted. The interne of the ward, M. Labric, found him in the evening after his entrance with intense fever, headache, loss of appetite, a white tongue, and a pain in the loins of such severity that it extorted cries of anguish from the patient, and absorbed almost all of the other symptoms. For the rest, there was no watering of the eyes, nor coryza; no cough, no sore throat, no diarrhœa. Here and there upon the face and limbs was an eruption, which gave rise to the suspicion of small-pox, but the patient besides having been vaccinated, asserted that these eruptions had existed for a long time.

The 24th the renal distress and headache were undiminished; the skin was hot; the pulse was full at 108. The conjunctivæ were ecchymosed; a great number of petechiæ covered the lower limbs and abdomen; they were confluent at the hypogaster, sparsely scattered over the breast and arms. Upon the legs several spots of a bluish tinge denoted profound extravasations. The gums were healthy; the patient has spit blood, and declares that his urine is bloody. Auscultation discovered diffused sub-crepitant râles. No appreciable alteration upon percussion. (Lemonade; venesection, ℥vj.; diet.) Immediate relief was experienced after the bleeding, subsequently, several hours after, the patient complained all at once of a sensation of suffocation, and suddenly died.

Examination of the blood drawn from the vein.—The blood did not separate into clot and serum; it preserved for twenty-four hours a dark colour, and a most remarkable state of fluidity. There was no trace of the buffy coat. Dr. Becquerel, who made the quantitative and qualitative analysis, arrived at the following altogether unexpected results:

Fibrin.—After beating the liquid for quarter of an hour with a willow twig, it was impossible to discover the least atom of fibrin.

Globules.—Same impossibility of separating the globules from the serum.

Density.—The density of the altered blood was 1053.56. In 1000 parts of blood, evaporation showed the quantity of water to be 803.84; the residue being icinerated, the solid constituents were 196.56.

We shall recur to this communication, which, like the author, we believe likely to throw new light upon scorbutic affections. MM. Louis and Gibert, who are appointed to report upon it, will appreciate its value.

Bulletin de l'Académie.

MEDICAL PATHOLOGY AND THERAPEUTICS.

8. *Is not Blood-letting sometimes dangerous in Apoplexy? By* M. Aussaguel.

This question assuredly merits the attention of every practitioner. M. Aussaguel has collected in his inaugural thesis, from which we borrow this extract, a number of facts upon the subject, which demand grave consideration.

"M. Cruveilhier when he lectures upon the treatment of cerebral hæmorrhage, never fails to say 'undoubtedly it is necessary to bleed, but be very circumspect,' * * and then he relates candidly, that having been sent for to visit a patient in the city, whom he found threatened with an apoplectic attack, he hastened to open a vein; the wound was scarcely closed when the patient was attacked with hemiplegia; and he adds, 'the relatives of the patient did not hesitate to say that it was my lancet that had done the mischief.'

"Since then we have read the thesis of M. Cornil: 'A woman,' says he, 'whom I observed last year in M. Rostan's ward, was occupied with her household duties, when she experienced, all at once, a loss of power in her left upper and lower extremity. She with difficulty walked to the house of her physician, who bled her immediately. After the venesection, she was unable to rise: she was completely hemiplegic.'

"The following instance came under our own observation. A friend came to us, stammering in such a manner, that he required fifteen minutes to make us understand that, the morning of the same day, upon awakening he was greatly surprised to find himself in this condition. There was slight loss of power in the right arm, and its sensibility was diminished. Dr. Bataillé having been summoned, practised venesection. The next day the stammering had increased, and the patient was copiously bled a second time. Syncope ensued, and the patient revived in fifteen minutes in a state of complete hemiplegia. It is now two years since he was able to utter a word.

"I ask, then, if facts of this kind were numerous, would they not have a kind of accusing eloquence against the employment of blood-*letting? and when* an impartial witness observes their development, is

he not tempted to say, with the relation of M. Cruveilhier's patient, 'it is the lancet that has done the mischief?'

The author afterwards attempts to account for these exceptionable cases, and his explanations are not without a certain value.

"What occurs after blood-letting in certain cases of pneumonia? Does not the weak, small, pulse become full, strong, and well developed? Do we not observe an increase in the forces of economy, and is it not generally believed that at that moment another congestive movement toward the lung occurs? Therefore it is to combat the results of blood-letting by blood-letting itself, that M. Bouillaud advises repeated venesection; in other words, the loss of the same quantity of blood is of greater efficacy when it is abstracted by several operations than by one.

"Should we wonder if this were true also for the brain? Why wonder that this organ, enclosed in its unyielding case, engorged with blood, resists the tendency to hæmorrhage for a time, and then yields to it after venesection, the circulation becoming at that moment more active? In other words, are there not two distinct causes operating in the production of apoplexy; the circulating mass, and the power which propels it? and does it not seem impossible to diminish the one without increasing the other?

"To diminish the first, without increasing the second, such should be the aim of the practitioner.

"It is with a view to attain this end that we propose that a vein should never be opened until the head of the patient is elevated, and cold applications are made to it, and the blood is invited to the lower extremities by sinapisms or pediluvia, and the patient has taken some soothing draught, with a few drops of digitalis."

Revue Med. Chir. de Malgaigne.

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9. *Of Blood-letting in Pneumonia.*

The memoir of Dietl on this subject, published several years ago, excited much attention at the time, and we think it will not be unprofitable to transcribe some of the facts and conclusions contained in a recent report by the same author, inserted in the weekly medical journal of Vienna (*Wien. Med. Vochschr.*) This memoir comprises all the cases of primitive and essential pneumonia treated at the great hospital of Vienna from 1847 to 1850, without excepting those aggravated by age, regimen, or analagous circumstances. Cases of secondary pneumonia supervening upon acute or chronic diseases, such as typhus, Bright's disease, etc., are excluded. No patient has been bled in pneumonia in this hospital since 1844; the practice is limited to draughts of gum water, or ptisans containing opium or an expectorant.

In three years 750 cases of pneumonia were treated on the expectant plan, viz.: 412 men, 338 women. Of these the pneumonia was complicated with acute disease in 140 cases, and with chronic disease in 249. Hyperæmia of the liver and acute intestinal catarrh were the most frequent *complications;* meningitis was never observed; gan-

grene of the lung only twice, and pulmonary abscess in a single case. Of 750 patients treated without blood-letting, 681 recovered, viz.: 384 men, 297 women; 69 died: 28 men, 41 women—8 died in the stage of red hepatization; 56 in that of infiltration; 5 in that of purulent infiltration. No fatal case was exempt from complication. The mean duration of the disease was 20 or 21 days. In 515 cases, the dyspnœa was very great; it is incontestible that the abstraction of blood diminishes the oppression, but the relief is only temporary. The author admits, however, that when the pneumonia is abandoned to the expectant plan, the embarrassment of the respiration is almost intolerable. This is, he adds, an inconvenience for which the rapid convalescence more than compensates.

Archives Générales, (Jan. 1853.)

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10. *Castoreum in Disordered Menstruation.*

The employment of castoreum seems to have gained some reputation in Europe in disorders of the menstrual flux. It is said to be especially applicable to amenorrhœa attended with painful and tympanitic swelling of the abdomen, and to dysmenorrhœa where the congested organ discharges only a few drops of blood by a sort of *uterine tenesmus*. We imagine the price of the article, and the difficulty of obtaining it pure, will be obstacles to its general employment in this country.

Journal des Connaissances.

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11. *Colchicum in certain forms of Anasarca.*

Professor Chelius, of Heidelberg, and Christison after him, announced the property of colchicum of increasing the proportion of urea and uric acid in the urine. Dr. Maclagan, in a work lately published, affirms that he has verified by extensive experience the truth of the statements of Chelius and Christison, and concludes that colchicum would be very advantageous in cases where the urea and uric acid were in less than normal proportion, and frequently replaced by other organic materials. The diminution of urea and uric acid is observed to very considerable extent in certain forms of anasarca, especially those consequent upon scarlatina. The urine in such cases is almost suppressed, the urea and uric acid being replaced by albumen, the presence of which is often characterised by symptoms of the greatest gravity.

These ideas upon the urogenic properties of colchicum require the sanction of more extended experience, but three facts are related in their behalf worthy of being cited. The first relates to a patient who had anasarca consequent upon scarlatina, in which suppression of urine and coma were the prominent symptoms. Diuretics scarcely increasing the proportion of urine. Dr. Maclagan prescribed the acetic extract *of colchicum. The* evening of the administration of the medicine,

the urine contained 2.427 of urea, a trace of uric acid; while the albumen amounted to 15.490, and the inorganic salts to 13.490. The action of the colchicum was so rapid, that the next day of its employment the comatose symptoms had considerably abated, the urine was abundant and had resumed its normal density. The analysis of the fluid, made the third day, showed 7.500 of urea, 0.480 of uric acid, while the albumen only amounted to 8.718. The fourth day the coma and anasarca had disappeared. A diarrhœa came on on the fifth day, which caused the medicine to be stopped; but an examination of the urine showed that the albumen had disappeared, and the urea and uric acid reached their normal proportions, (13.573 for the former, and 0.814 for the latter); there was but 7.431 of inorganic salts. The two other patients presented the same symptoms, and were treated with the same success by the colchicum.

The preparation used by Dr. Maclagan was the *acetic extract of the bulbs*, in the dose of from one to three grains, repeated several times a day.

The discovery of Chelius dates as far back as 1828. He found that the urine of persons taking the wine of colchicum seed contained more uric acid than it did before the employment of the medicine. Thus in a case of gout, in which he gave this wine, the urine, before he employed it, contained 0.069 of uric acid, either free or combined with ammonia; four days after, the proportion was 0.076; the eighth day, 0,001; and the twelfth day, 0.0102. This result explains the relief it gives to gouty patients.

Répertoire Medical.

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12. *Albuminuria and Anasarca in connection with Affections of the Spleen.* By Dr. SCHMIDT, of Posneck.

A man, aged 18, who had long lived in one district, where intermittent fevers were common, became the subject of anasarca and albuminuria. The anasarca vanished after the appearance of a miliary eruption, accompanied with desquamation over the whole body. The albuminous urine remained unaltered for eight months, when an attack of intermittent fever came on, which yielded to bark. Upon his recovery, it was found that the urine had regained its standard of health.

The author observes, that in affections of the spleen there are often albuminous urine and anasarca; both stand in intimate relation with the affection of the spleen, as the albumen vanishes from the urine, and the dropsy disappears so soon as the affection of the spleen is removed.

Albuminuria is, in these cases, a consequence of altered innervation of the nerves of the capillary vessels of the kidney, and perhaps of the whole body, which may proceed from the affection of the spleen,—an organ so important in the metamorphosis of the blood-corpuscles. That no positive degeneration of the kidneys exist, is proved by the cure of the disease after the administration of proper remedies.

Medical Times, (from Deutsche Klin.)

13. *Relations of vaccination and inoculation to Small Pox.*

From a very interesting and valuable paper upon this subject, communicated to the Epidemiological Society of London, by Dr. Waller Lewis, F. G. S., we take the following extracts. The author commenced by considering the various questions in regard to this disease, of which an elucidation is now so anxiously called for. He then stated numerous cases illustrative of the protective power of vaccination, and of the superiority of vaccination to inoculation. He then referred to the probability of the fact that measles are rendered milder by vaccination.

"Joler has described an epidemic of measles that took place in the Retzat Circle, in Bavaria, in the district where he himself resided. He says that the disease was much milder among the vaccinated than among the unvaccinated. 15 in 52 died among the non-vaccinated, while barely 1 in 300 died among the vaccinated, showing that measles was 86 times more fatal among the former than the latter."

Examples of imperfect vaccination were then dwelt upon, and the author expressed his opinion clearly and decidedly that where well-marked cicatrices were not left, the operation should be accounted a failure, and should be repeated, although he owned that this was not the opinion held by many German and English physicians.

Vaccinating from re-vaccinated persons, from those who had been inoculated, and from such as had previously had small-pox, was strongly denounced, as vaccinia must be extremely modified in such cases. The author added: "When we interest ourselves strongly in the propagation of vaccination, we must guard ourselves from furnishing arms to its adversaries. And is it not furnishing them with arms to employ a virus of which we are not certain?" A most interesting collection of cases was then read, in which small-pox had attacked the same individual three or four times; among others, the following, that had come under the author's own attention was narrated:—"Robert D., a tradesman living in North Audley-street, had small-pox the first time at the time of his birth, his mother suffering from it at her confinement. He was attacked with the disease a second time when a boy at school, between 9 and 10 years of age. When 18 years of age, he took it for the third time from his sister, who died of it. All the attacks were severe, but the last the most so. He lost his hair and his nails, and the skin of his feet; he was blind for several days, and his life was despaired of. However, he is still alive, and not much disfigured. He was never vaccinated nor inoculated. I believe, if again exposed to the disease, he will take it again." Cases were then adduced, to show that several members of the same family appear sometimes to show great susceptibility to take the disease. The following curious case of small-pox in the lower animals was then adduced, the author adding, that any similar well attested cases would be very valuable additions to the facts collected by the Society on this subject. "The following case was related to me by a lady of rank, on whose veracity I can place the greatest reliance. Some years ago, just after her confinement, she was seized with small-pox. It became necessary to have her breasts drawn, *and, as no child could* be obtained, recourse was had to a puppy, which

answered the purpose. At the usual time the puppy sickened, and had the disease known by the name of the 'distemper.' It is said that vaccination, when successfully performed on puppies, will almost to a certainty prove a prophylactic against distemper." Then followed some interesting cases of individuals who could be neither vaccinated nor inoculated. The last cases adduced were of individuals who appeared to have perfect immunity from small-pox. "I have detailed the case of Robert D., who evidently possesses a strong innate susceptibility to the action of the small-pox virus, as shown in his having already taken the disease three several times. I have now to draw your attention to a case the most directly opposite to this. Strangely, enough, it is that of his own brother Thomas. From the elder brother Robert, as well as a sister, having taken small-pox, the parents believed that all their children must take the disease, and refused to have the subject of this case vaccinated or inoculated. He was accordingly exposed when a child to the contagion, lying in the same room with his sister, while she was suffering from the disease, as well as waiting on his brother in his second and third attacks. Although since that time he has been several times exposed to the contagion, he has never felt the slightest ill effects from it." "Examples of persons possessing a natural immunity from the disease are rather numerous. Dr. Jackson, of Philadelphia, saw a man at the Small-pox Hospital, engaged in laying out and burying the dead, who had never had an attack of the disease. He had been frequently inoculated and vaccinated, but always unsuccessfully. Van Swieten speaks of a physician, 70 years of age, who had practised through numerous epidemics of the disease, but had never taken it. Diemerbrock states, that immunity from small-pox was a privilege of his family. It was possessed, he asserts, by his grandfather, grandmother, his father, and himself.'* The author drew the following deductions from the cases adduced:—

1. That vaccination is a most eminent protection against small-pox.
2. That when perfectly performed it is almost, and, in some instances, more protective, than inoculation or small-pox itself.
3. That it appears to render some exanthemata, *e. g.*, measles, milder than they would have been otherwise.
4. That neither vaccination, inoculation, nor small-pox, guarantees the individual, in every instance, from small-pox.
5. That small-pox attacks some persons three times, or oftener.
6. That there exist certain individuals who have perfect immunity from vaccination, inoculation, and small-pox.
7. That great susceptibility to, or perfect immunity from, small-pox, is sometimes found to be common to several members of the same family."

* We are acquainted with a physician of this city, who has often been vaccinated unsuccessfully, and who has repeatedly attended cases of small-pox, and made post-mortem examinations of those dying of the disease, without having had an attack of it.—[Eds.

14. *Iodide of Potassium in the Affections caused by Lead and Mercury.*

Dr. Budd gives in the January number of the Medico-Chirurgical Review, a translation from the '*Annales de Chimie et de Physique*' of a memoir of M. Melsens upon the treatment of metallic poisoning by iodide of potassium. Dr. Budd states in his preface, that "M. Melsens alleges, and his numerous experiments seem conclusively to show, that this salt is not only a safe, certain and radical cure for the common forms of saturnine and mercurial poisoning, but an equally sure preventive of the injurious effects frequently produced by emanations from lead and mercury.

"The relation which M. Melsens seems to have established as occurring between iodide of potassium and mercury when present together in the living body, is not limited to the cure of mercurial poisoning, but has an important bearing on the therapeutic use of these agents, more especially in the numerous cases in which, according to present practice, they are given concurrently, or in near succession.

"In all cases of mercurial or saturnine poisoning, M. Melsens assumes, and no doubt rightly, that the metallic substance is in actual union with the affected part or parts, and is retained there in the form of some *insoluble compound.*

"According to his view, the iodide of potassium, after its absorption into the blood, combines with the poison, and forms with it a new and *soluble* salt—liberates the metal from its union with the injured part—dissolves it out, so to speak, from the damaged fibre, and set it once more afloat in the circulation. The new compound he supposes to be eliminated from the kidney almost as soon as formed, so that both poison and remedy being cast out together, the cure may be said, in a peculiar sense, to be radical and complete."

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15. *Iodized Injections in Dysentery and Chronic Diarrhœa.*

The efficacy of enema containing nitrate of silver in solution, in these diseases, is admitted; M. Eimer assures us that iodized injections prepared as follows, are at least equally valuable:

℞. Iodinii, gr. v. ad x.
Potassii iodidi, q. s.
Aquæ, ʒj. ad ℥ij.
Fiat enema.

This enema should be administered twice or three times in the twenty-four hours. If tenesmus exists fifteen or twenty drops of laudanum should be added, and a mucilaginous vehicle should be substituted for the water.

Henle's Zeitschrift. (*Gazette des Hopitaux.*)

16. *Turpentine in Hæmoptysis.*

Long experience has taught Dr. Lange, (of Koenigsberg,) that the spirits of turpentine acts more promptly in hæmoptysis than the different methods usually employed in that affection, such as taunin, common salt, acetate of lead, alum, nitrate of potash, cold applications and leeching. The efficacy of turpentine in the treatment of hæmoptysis, has been already recognized by Copland, Wiltshire and others, but this corroboration of it deserves to be recorded.

Ann. de Med. de Roulers. (*Gazette des Hopitaux.*)

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17. *Sulphate of Quinia in Continued Fevers.*

Dr. Barclay, registrar of St. George's Hospital, London, furnishes an analytical report, (*Medical Times and Gazette*, Jan. 8th, 1853,) intended to exhibit the comparative results of treatment of fever with and without large doses of quinia, as illustrated by the fever patients entering that hospital from May to November 1852. The cases were all well marked; some were very severe, others were mild examples of the disease. The prevailing type of fever was what would be called "typhoid," not true "typhus."

"Of the 13 cases treated by quinine, there were 4 cases without spots or decided ulceration, of which the average duration was eight days before admission, and twenty-three under treatment; 4 cases with spots only, of which the average duration was ten days before admission, and twenty-six under treatment; 5 cases with ulcerated bowels, of which 3 also had spots, and their average is fifteen days before admission, thirty-seven under treatment."

There were 51 well marked cases which were treated without quinine, "among these 20 exhibited fever spots on the chest or abdomen, and 6 with and 5 without spots gave unequivocal evidence of ulceration of the bowels. By this is not meant merely the occurrence of thin watery motions, which have been observed in the majority of the patients, but the persistence of diarrhœa, with a patchy, shining, or fissured tongue. We have, therefore, as the basis of our analysis, 26 cases which neither had fever spots nor distinct evidence of ulceration, 14 with spots but not certain ulceration, and 11 in which the presumptive evidence of ulceration was strong.

"The average duration of these cases, was—of the 26 cases, 10 days before admission and 21 days under treatment; of the 14 cases 8 days before admission, and 22 under treatment; of the 11 cases, 7 days before admission, and 33 under treatment."

The quinine was invariably administered in ten grain doses every four hours.

From these data the author concludes that the treatment by quinine possesses no advantages. In regard to the effect of the remedy, he says: "In watching these cases, one fact has been most striking and unmistakable, and that is, *the effect of the remedy when pushed to its full extent: the pulse is depressed*, the vital powers are prostrated,

and vomiting follows. In some of the more severe cases there was such a tendency to sinking that stimulants were had recourse to, and seemed urgently called for. But this condition was by no means followed by a remission of the disease, which recurred as soon as the physiological effects had passed off.

"One or two cases got well very speedily under its employment, in which general prostration was not produced, and its special effect, if any, was limited to lowering the general circulation. But it must be remarked, that, as we have no specific indications by which to measure the intensity of individual cases, so it is quite impossible to tell whether rapid convalescence in one or two instances was due to the treatment employed or to the milder character of the disease. It is unquestionable that depression of the pulse is one of the physiological effects of this remedy."

Dr. Dundas, of Liverpool, in a later number of the same journal, states that his experience is totally at variance with that of Dr. Barclay. Dr. Dundas supports the positions advanced in his work, "Sketches of Brazil," &c., in which he attempted to identify the poison of typhus, with that of the intermittents of the tropics, and mentions that he has administered quinine to cinchonism in many hundred cases, and seen it largely given by others, without ever encountering the physiological effects detailed by Dr. Barclay.

Dr. McEvers, physician to the Cork Fever Hospital, has resorted to the quinine treatment, in all stages of the disease, with the happiest results. He gives (*Dublin Quarterly Journal*, Aug. 1852,) the details of nine cases, in all of which, with the exception of one, the administration of quinine was signally successful.

Mr. Hayward, of Liverpool, furnishes (Lancet, Oct. 1852,) the result of his observation of eighty successive cases.

"In twenty-seven the treatment was commenced in the 'first stage;' in fifty-three, in the 'second stage.' Three were fatal. All the rest recovered more or less quickly.

"The principal treatment in all, except one, was the use of disulphate of quina, so much recommended by Dr. Dundas, of this town—of course modified according to the predominating symptoms. Thus, if I found the pulse quick, weak and thready; the tongue cracked, brown and dry, (rough or smooth;) great thirst and delirium; no appetite; tenderness of abdomen; soreness of flesh, &c., I put the patient upon disulphate of quina, in solution, at once; four or five grains every two hours. If great restlessness, and no sleep, I added three or four minims of tincture of opium to each dose. If general sinking of the vital powers, some wine or brandy, with beef-tea. If the solution of quina were vomited, it was given in an equal quantity of wine, or wine and water. If the patient continued sinking, I increased the quantity of quina, but never had occasion to extend beyond seven grains per dose. When ringing in the ears occurred, the quantity was decreased, but still kept up till there was a good appetite. If the delirium was intense, the pain in the head described as heavy, (which were always strong subjects, whose bowels were confined,) with strong pulse, a dose of chloride of mercury, and sometimes a blister to the nape of the neck. If tenderness of abdomen was great, a few leeches, or sinapism. If vomiting, *a sinapism over the stomach*. If diarrhœa, a little calomel and opium,

or diacetate of lead and opium; though this symptom sometimes required nothing more than the tincture of opium given with the quinine.

"In seventy-nine cases, marked improvement was observable in the course of twelve hours: the pulse was the first to improve, then the delirium to give way, then the pain in the head, the thirst, the soreness of flesh, tenderness of abdomen, dryness of tongue, and the appetite to improve. A pulse of 120, small and thready, would become 90, softer and fuller; and in the majority of the cases the pain in the head and delirium ceased entirely in the same period, and a rapid improvement followed, with the small exception of two cases of children ten and eleven months old, neither of whom had the medicine regularly, and both were complicated with bronchitis. The eightieth case was that of a woman, in which quina was not used. These three died, evidently from typhus. If the typhoid symptoms were allowed to become well marked, and the patient to sink much, his recovery was slow, and he required wine or brandy. I feel confident, from personal observation, that were the disulphate of quina to be used promptly, and to cinchonism, the mortality even of typhus itself would be very small."

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18. *Corrosive Sublimate in Acute Hydrocephalus.*

Every observant physician is now aware that blood-letting and the antiphlogistic treatment in general completely fails in acute hydrocephalus; leeches seem even to accelerate the progress of the malady. Dr. Riecke has derived advantage from the use of bichloride of mercury in the outset of the disease; he gives a number of cases to illustrate its efficacy, but, unfortunately, does not detail the symptoms with sufficient precision to enable us to judge of the degree of the affection which he combatted. We mention this observation without wishing to recommend corrosive sublimate instead of iodine or any other medication, but only to furnish the physician with another resource against a disease so frequently fatal.

Journal fur Kinderkranheiten (Gazette Medicale.)

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19. *Chorea Treated by Fowler's Solution.*

Dr. Hollman, a German practitioner, reports several cases of chorea successfully treated by Fowler's arsenical solution, in which the usual remedies had failed. He prescribes the medicine in the ordinary dose.

(Gazette des Hopitaux.)

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20. *Ammonio-Sulphate of Copper.*

At the Westminster Hospital, Dr. Hamilton Roe has recently employed this *salt very successfully* in the treatment of a series of cases

of severe chorea, the patients being mostly children under fourteen years of age. In several the sulphate of zinc and sesqui-chloride of iron had been tried previously, and without benefit. The dose given has been from half a grain to a grain three times daily. Its use in this complaint is not novel, although not much resorted to in this country. In Italy it has gained a considerable reputation, and is known by the name of the "specific of Stissero." Mr. Startin has for some time been accustomed to prescribe a long continued course of the ammoniated copper in malignant diseases, and seemingly with some good results. Its action is probably that of a tonic. In several cases the health of the patient has appeared to improve very perceptibly. Scirrhus of the breast and cancroid ulcers of the skin are the forms in which it has principally been tried. The dose has ranged from the eighth to a quarter of a grain three times daily, and has often been continued for many months. We believe it has been employed for nearly similar purposes in veterinary medicine.

Medical Times and Gazette.

MATERIA MEDICA, PHARMACY, AND MEDICAL CHEMISTRY.

21. *Ipecacuanha as an external application.*

M. Delioux praises an ointment of ipecac as possessing all the advantages without any of the inconveniences of the tartar emetic ointment. If, he says, the powdered ipecacuanha be incorporated with some fatty substance, and the skin be rubbed for a few minutes with this mixture, a characteristic eruption soon appears. At first this consists of little florid papulæ, very numerous and often confluent; afterwards of true pustules, always of small dimensions, umbilicated, suppurating but little, and drying with rapidity, leaving no cicatrix. Here is the formula of M. Delioux.

℞. Pulveris ipecacuanha, j.
Olei olivæ, j.
Adipis, ij.

In the cases of women and children, the ointment of ipecac, causing less pain, and leaving no indelible trace, may often be preferable to the antimonial ointment, if their therapeutical properties are identical. *A priori*, we should suppose that the ipecac ointment would be less energetic, since it produces less irritation; but perhaps it will prove sufficient, for nervous individuals particularly.

Journal des Connaissances.

22. *Prevalence of Iodine in Nature.*

Elaborate papers have lately been laid before the French Academy of Sciences, proving the existence of iodine throughout the economy of nature. Among these papers, those of MM. Chatin, Marchand, Niepce and Meyrac are most interesting. Soon after the discovery of iodine by Courtois, Sir Humphrey Davy established its existence in marine plants, but the investigations of these philosophers comprise all the resources of nature, and are equally satisfactory in demonstrating its almost universal distribution. Earth, atmosphere, water, animal and vegetable life, have all been subjected to their analyses, and found to contain proportionate quantities of iodine. The researches of M. Chatin, taken in connection with his deductions, are especially valuable, in a practical point of view, as bearing upon the prevalence of goitre and cretinism, in those districts where the relative quantity of iodine is found to be deficient. We know of no subject that would more richly reward the industry of our scientific men than this; certainly our country presents a vast and varied field for research. Statistics showing the atmospheric and dietetic influence of iodine upon many diseases now so mysterious, would be invaluable.

(*Journal de Chimie Medicale, Janvier* 1853.)

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23. *Phosphorus in Cod Liver Oil.*

M. J. Personne presented to the imperial academy of medicine, Jan. 25th, 1853, a memoir, from which we take the following conclusions:

1. Phosphorus is not contained in all oils from the liver of the cod.
2. This metalloid is found in the form of earthy phosphates in those oils of which it is an ingredient.
3. The presence of this phosphate is due to the vicious mode of preparation of the medicine, and indicates an oil of bad quality.

Bulletin de l'Académie.

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24. *Oxalic Acid in the Syrup of the Sesqui-Nitrate of Iron.*

The March number of the American Journal of Pharmacy contains an interesting paper by Mr. Joseph Laidley of this city, in which it is shown that the syrup of pernitrate of iron is an ineligible and unscientific preparation, since a reaction takes place, after a short time, between the excess of acid and the sugar, and oxalic acid is generated. The syrup of the *proto*-nitrate, prepared by Prof. Procter's formula, remains unaltered and perfectly good for a considerable period, and when a syrup of nitrate of iron is wanted, this should always be employed; in it there is no excess of acid to act upon the sugar, which is used to prevent peroxidation of the iron; and it is not only permanent but pleasant to the palate.

25. *Indigenous Opium in France.*

At the meeting of the French Academy of Medicine of the 28th of December, M. Bourchardat read a report upon the preparation of opium in France, which stated that the chemical researches of the commission appointed to investigate this subject, demonstrated that the indigenous opium was richer in morphia, and more uniform in strength than that imported from the East. The therapeutic effects of the indigenous drug have been studied in the wards of MM. Grisolle and Rayer, and its action is found to be more energetic than that of foreign opium, four grains being equivalent in sedative power to five grains of the latter. The commission proposed to make the preparation of opium a government monopoly. M. Chevallier opposed this, but was overruled by the academy.

Bulletin de l'Académie.

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26. *Castor Oil and Magnesia.*

By combining an ounce and a half of syrup of orgeat, half an ounce of castor oil, and four grains only of calcined magnesia, a syrup of castor oil is prepared, which is an excellent purgative for young children, purging sufficiently in doses of an ounce. The flavour is not disagreeable, and is enhanced by the addition of a drop of the essence of lemon or mint.

Revue Médicale de Cayol.

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27. *Conium.*

Dr. Parole, a Sardinian physician of distinction, from a good deal of experience in the use of hemlock, has arrived at the following conclusions: 1. That the seeds are the part of the plant most constant in its medicinal action. 2. That the dose may be from two to four grains a day, gradually increased to ten. 3. That independent of its special action in syphilitic and cancerous affections, it has an energetic contro-stimulant or hyposthenic action, which renders it very advantageous in many acute and chronic sthenic affections of the vascular system, and even in pulmonary phtisis.

Gazette des Hopitaux.

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28. *Arsenic in the Sub-Nitrate of Bismuth.*

Every one knows that the bismuth employed in the preparation of the sub-nitrate, contains a notable quantity of arsenic, and that the fusion of the metal with the nitrate of potash, is indispensable in order

to procure a perfectly pure product. When employed in small doses, the minute quantity of arsenic contained in the salt, gives rise to no bad symptoms, but we are acquainted with practitioners who employ this remedy not only in doses of a drachm, as advised by Pereira, but even in doses of from half an ounce to an ounce, repeated during the day, in some forms of dyspepsia. The physician and apothecary, therefore, who is scrupulous in the choice of his medicines, and is anxious to diminish as much as possible the responsibility resting on him, will test this salt before giving it to the patient.

This is the method proposed by M. Cornut, which is simple and successful. Moisten ℈ij of sub-nitrate of bismuth with pure sulphuric acid, in a porcelain capsule, and evaporate to dryness over a spirit lamp. Mix the residue with distilled water, filter, and add the liquid obtained to the simplest form of Marsh's apparatus. If arsenic is present, it will be easily recognized by the deposit produced by the flame of arseniuretted hydrogen.

Repertoire de Pharmacie.

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29. *Bromo-Iodides in the Treatment of Insanity.*

Dr. Lunier, chief physician of the lunatic hospital at Niorte, is convinced that the bromo-iodides are useful in the treatment of mental alienation, and that they may often be substituted advantageously for cod liver oil. Out of a large number of formulæ recommended by Dr. Lunier, we select the following:

℞. Potassii iodidi, gr. xxxvj.
" bromidi, gr. xxv.
Pulveris radicis gentianæ, ℈ij.
Artemisiæ syrupi, q. s. ut fiat massa, in pilulas lx. dividenda.
S. A pill thrice daily.

℞. Ferri iodidi, xxxvj.
" bromidi, xxv.
Pulveris radicis gentianæ, ℈ij.
Syrupi corticis aurantii, q. s., ut fiat massa, in pilulas lx. dividenda.

℞. Potassii iodidi, gr. xij.
" bromidi, gr. viij.
Extracti gentianæ, ℈j.
Aquæ destillatæ, ℥viij. Fiat solutio.
S. a table spoonful thrice daily.

This solution can be given in the food, if care is taken to avoid those aliments containing starch.

Annales Medico-Psychologique.

30. *Preparation of Mercurial Ointment.* By M. MIGEST, of Blamont.

Take of
Metallic mercury, ℔j.
Fresh lard, ℔j.
Sweet oil, ʒv.

Melt the lard; then agitate the metal with the oil in a marble mortar five or six seconds. The mercury will assume a very finely divided condition. Seize this moment to add the lard in small quantities, agitating the liquid all the time. In ten minutes, at the farthest, two pounds of excellent mercurial ointment are prepared.

I have repeated this experiment many times with a satisfactory result. If, after agitating the mercury and oil for five or six seconds, you continue to shake, the metal returns into a mass, and the operation becomes impossible. The same difficulty is met with if olive oil is used instead of sweet oil, or a metallic instead of a marble mortar.

Mercury costs ninety cents per pound, lard, twenty cents. In a pound of mercurial ointment, therefore, the materials are worth 55 cents; but the manufacturing druggist sells it at one dollar a pound. By my process, the apothecary can make two pounds of ointment and gain ninety cents, by a manipulation which will occupy only ten minutes.

Repertoire de Pharmacie.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIONS.

31. *Arteriotomy in Wounds of the Head.*

At the meeting of January 24th, 1853, of the French Academy of Sciences, M. Delcau read a memoir, the object of which was to prove that the author had discovered the signs which indicate the quantity of blood it is necessary to take after wounds of the head, in order to prevent all inflammatory reaction upon the brain and its membranes.

Within a few months, four individuals of different age and sex, had presented to the author severe lesions of the head. From these observations, he deduced that in wounds of the head it is necessary to master and subdue all reaction. This end is attained by arteriotomy, of which the effects are to be judged by the pallor of the tongue, gums and pharynx. Until these signs are observed, the blood should be allowed to flow without regard to quantity. If the first bloodletting together with the loss of blood from the wound should not be sufficient to prevent all inflammatory reaction, which, in my opinion,

says the author, is prejudicial to prompt and salutary cicatrization,* the blood-letting should be repeated.

Such are my principles, which are justified by the employment, so general at the present day, of streams of cold water directed upon lacerated and contused parts. Dr. Baudens is not afraid to apply ice continually for many days. This application while it modifies the reaction does not retard the work of cicatrization at all. But dangers arise in this treatment, when subjects suffering from chronic phlegmasiæ are subjected to it. Blood-letting on the contrary, when practiced before the general reaction, preserves the wounded from the complications of traumatic fever, which inevitably result in these latent phlegmasiæ.

To sum up what I have said in a single word. When you are called in time to wounds of the head, always prevent the development of traumatic fever; and to attain this end, bleed until the buccal mucous membranes become pale. (*Commissioners—MM. Velpeau, Roux and Andral.*)

Comptes-Rendus de l'Académie.

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32. *Does a Discharge of Blood by the Ear necessarily indicate a Fracture of the Cranium?*

This is a question which has lately engaged the attention of M. Velpeau. A case occurred at La Charité, where the patient had fallen down a pair of stairs. The shock was so violent as to cause insensibility for three hours, but the patient recovered and exhibited nothing unusual but a considerable discharge of blood from the right ear. Many conclude such a symptom is positively indicative of fracture of the base of the cranium, and more especially of the petrous portion of the temporal bone; but the learned professor of La Charité thinks the bony walls of the brain may receive a shock which would vibrate so violently upon the small bones of the ear as to cause laceration of the tympanum and discharge of blood without any rupture of continuity on the part of the bones of the cranial cavity.

Journal des Connaissances.

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33. *M. Velpeau on Paronychia.*

M. Velpeau considers that the three degrees of this affection enumerated by authors are inadmissible, in consideration of the peculiar anatomy of the part. It is known that the fibrous sheath which covers the superficial and deep flexors of the finger, ceases abruptly at the base of the last phalanx; and that sheath and tendon both terminate there in a fibrous expansion covering the anterior face of the phalanx, and forming to some extent its periosteum. The relation between the

* See Art. I.

superficial and deep tissues at this point, gives to the subcutaneous inflammation a tendency to propagate itself to the periosteum, and to gain the subjacent bone. The denudation of the last phalanx and consecutive necrosis are the accidents commonly observed. When this termination cannot be avoided, ought the surgeon to amputate the joint or simply extirpate the bone? M. Velpeau concludes, in view of the great deformity caused by partial amputation of the finger, and its frequent effect in incapacitating persons for their chosen professions, that it ought not to be resorted to when extirpation is admissible. The latter is rather more difficult of performance, but when adopted, by preserving the soft parts, it follows that the cutaneous, cellular and fibrous tissues, already condensed by previous inflammation, acquire a demi-cartilaginous consistence, losing little by shortening and leaving the finger still useful. The deformity is scarcely appreciable, inasmuch as the root of the nail being preserved, the nail retains its normal characters.

The operation is simple enough. The bone having become sufficiently moveable, the opening in the soft parts is enlarged parallel with the finger. The bone is then seized with a pair of forceps and isolated from the soft parts by means of a bistoury or pair of scissors.

Journal des Connaissances.

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34. *Spontaneous Fracture of the Femur.*

At a late meeting of the Medico-Chirurgical Society of London, (Jan. 14th, 1853,) Dr. Van Oven related a case of spontaneous fracture of the femur, which occurred in his own person. On the 25th of May, 1852, he went to bed in perfect health, and fell into a sound sleep. At three in the morning he awoke in the act of turning, with a feeling of violent pain in the thigh, just above the knee. On putting his hand to the part he felt the belly of the vastus muscle in strong contraction. At the same moment a loud snap was heard. The swelling of the muscle subsided, and he could feel the grating of the two ends of bone. It was found on examination that the femur was fractured transversely three inches above the knee-joint. A long splint was applied, and the limb was allowed to swing. The progress of the cure was regular and rapid. The splint was removed on the 9th of July; the patient could walk for an hour with the aid of two crutch-handled sticks on the 10th of August, and on the 30th of September he resumed his ordinary avocations.

Dr. Van Oven is 56 years of age; has led a regular life; is capable of considerable exertion; he is not aware of any hereditary tendency to disease; he has never had syphilis; nor has he ever been salivated. This case he considers to stand alone, and to be worthy of record.

Mr. Fergusson said that there was one point in the treatment, which, though not novel, he wished to bring before the society. The fracture was treated upon a swinging apparatus from the first, a plan very commonly applied in fractures of the leg. During the last few years he had adopted the same method in fractures of the lower part of the *femur, and this case* was another testimony in favour of the plan. He

should wish the opinion of any member of the society on this mode of treatment; but particularly that of Mr. Luke, who had seen more of it than he (Mr. Fergusson) had. He wished to know if Mr. Luke had found the swinging apparatus useful in fractures of the lower third of the femur. He (Mr. Fergusson) regarded it as not only useful in those cases, but also in others, particularly in disease of the knee-joint. Patients suffer exceedingly in cases of ulceration of the cartilage, from the grating together of the ends of the bones; and he was bound to say, that he had seen astonishing relief afforded by the swinging apparatus in those cases.

Mr. Luke in reply, stated that the treatment of fractures of the thigh by the swinging apparatus had not been tried at the London Hospital. When the fracture occurred in the lower part of the femur, both fragments might be placed upon the apparatus and might swing together in safety. This plan then might be applicable in such cases.

Mr. Hodgson remarked that the swinging plan was first employed in Switzerland. He considered it very applicable to another class of fractures, viz: those of the patella, the patient being enabled to move about better and not confined to the irksome position enjoined by the apparatus commonly employed.

Lancet, Feb. 1st, 1853.

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35. *Spermatic Hydrocele.* By M. SEDILLOT.

The learned professor of Strasbourg, in a note addressed to the Institute of France, Jan. 31st, states that on two occasions he has met with voluminous, pyriform, slowly developed hydrocele, in which the contents consisted of serosity in which innumerable zoosperms were floating. In both cases the patients were adults, in the full enjoyment of their virile powers. The author sums up the opinions advanced in his paper, in the following terms:

1. The existence of spermatic hydrocele, is no longer doubtful, and must hereafter occupy a place in the pathological history of scrotal tumours.
2. A rupture of the efferent ducts of the testicle appears to be the cause of these tumours.
3. The existence of a cyst, primarily developed around the extravasated product, explains the difficulty of the treatment.

Comptes-Rendus de l'Académie.

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36. *Recto-vesical Operation for Stone in the Bladder.* By M. MAISONNEUVE.

[We copy the following account of a new method of cystotomy, which, in the hands of the bold and fortunate surgeon who practices it, is attracting considerable attention in Paris. It is a modification of Celsus' method, known under the old denomination of "cutting on the

gripe," which was revived by Foubert, and by Sanson in 1817. Whatever may be its advantages, the inevitable result of a recto-vesical fistula, must forever confine this operation to particular cases, and render it inadmissible as a general method for the extraction of calculi.]

"Among the patients under treatment at the Hospital Cochin, there is one upon whom M. Maisonneuve has practiced his new method of rectal lithotomy. This operation commends itself to practitioners, by the celerity of its execution, and the simplicity of its results.

"The patient is a young man of seventeen, who, for many years, has suffered from numerous urinary fistulæ, opening in the perineum and rectum.

"Several operations previously practiced by M. Maisonneuve, had reduced all of these fistulæ into one, opening immediately above the sphincter of the arms, in the interior of the intestine. Cicatrization appeared to be going on rapidly at one time, but for the last few weeks the fistula had remained stationary: this joined to the pain in urination, caused the suspicion of a concretion in the bladder.

"Exploration with a metallic sound, in fact, demonstrated the presence of a stone about the size of an almond. Among the numerous operative procedures for the removal of calculus, M. Maisonneuve believed the 'rectal method' proposed by himself some years ago, the most appropriate, and the 7th of December, he operated in the following manner:

"Chloroform having been administered, the patient was placed in the usual position, and a staff was introduced into the bladder, and confided to an assistant. The surgeon then carried the point of the double lithotome (lithotome caché of Dupuytren) into the groove of the staff, and having reached the cavity of the bladder, he turned the concavity of the instrument downwards, the blades were opened, and a bi-lateral incision of the prostate effected. The finger was then introduced to guide the forceps, and the stone was extracted without difficulty. The whole operation did not occupy two minutes.

"Scarcely a spoonful of blood was lost. The patient was put to bed without any dressing. He never lost the power of retaining his urine. This, it is true, was passed by the rectum, but not involuntarily.

"Although in this case the operative procedure was rendered easier by the fistula which already existed, we still think that this operation possesses real advantages. M. Maisonneuve has already performed it a number of times with success. We recollect one case in particular, which this skillful surgeon presented to the Academy of Medicine in 1847, in which the patient, relieved of a very large calculus, recovered rapidly. He appeared, in fact, before the academy upon the ninth day after the operation, and he, too, had never for an instant lost the power of retaining his urine.

"We believe that this method is suited to replace the others advantageously in many circumstances. Like the bi-lateral operation, it involves an incision of the prostate in its oblique diameters, leaving the verumontanum and ejaculatory ducts intact. By avoiding the perineal incision, it is more simple and more rapidly executed than any other. *It prevents all danger of* cutting the bulb or transverse arteries; and

finally, by allowing the urine to be retained in the rectum by the sphincter ani, it avoids all danger of more or less prolonged incontinence of urine.

Revue Médicale de Cayol.

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37. *On the Solution of Calculi in the Bladder.* By H. Bence Jones, M. D., F. R. S.

At a meeting of the Royal Society, Dr. Jones read a paper on the solution of urinary calculi in dilute saline solutions, at the temperature of the body, by the aid of electricity.

This paper contained the record of a number of experiments made to determine whether, out of the body, urinary calculi could be dissolved by placing them in dilute solutions of nitrate of potash and other salts, and then decomposing the solution in contact with the calculus by means of the galvanic battery. The urinary calculus was carefully dried and weighed, then fixed between the poles of a galvanic battery, after which it was immersed in a solution of nitre, and at the end of the experiment it was re-dried and re-weighed. The loss of weight gave the effect which was produced. The different calculi which had been used were also exhibited, showing the different degrees in which the various kinds of urinary calculi are dissolved when submitted to this treatment. The conclusions at which the author arrived may be thus stated: In a solution of nitre containing 20 grains to the ounce, kept at the temperature of the body, uric acid calculi can be dissolved by the aid of electricity, at the rate of from 2 to 9 grains an hour. The solution takes place at the alkaline or negative pole. In the same time, and under the same circumstances, phosphatic calculi can be dissolved at the rate of from 2 to 25 grains. The solution takes place at the acid or positive pole. Calculi, consisting of oxalate of lime, proved to be far less soluble, usually not more than half a grain an hour, and at most 2 grains being dissolved. At the conclusion of the reading of the paper, the author stated, that he had been engaged in making further experiments with a solution of nitrate of potash containing only 10 grains to the ounce; and he exhibited some large uric acid and phosphatic calculi, which had been partially dissolved by the decomposition of this solution at the surface of the calculi. He also showed a catheter or litholyte, made by Weiss, which fulfilled the conditions requisite in an instrument for effecting the solution of urinary calculi in the body. It resembled an ordinary lithotrite, but the blades were—1st, isolated so as to conduct the electricity to the surface of the stone when it had been caught; 2ndly, the external surfaces of the blades were guarded, so that in case they came in contact with the mucous membrane, no chemical action would be there set up; 3rdly, a double channel for the injection for the solution of nitre was formed inside the instrument. Lastly, the author stated, that although many difficulties would have doubtless to be overcome before he could lay the result of his experiments within the body before the society, still they would only be mechanical difficulties. The

principle, which consisted in setting up mechanical action at the spot where it was wanted, whilst elsewhere a dilute neutral solution was present, left nothing further to be desired; at least so far as the solution of uric and phosphatic calculi was concerned. At present, by the aid of the lithotrite, mechanical force is applied to the surface of the calculus, and the stone is passed in fragments. At some future time, by the aid of the litholyte, chemical force will be set up at the surface of the calculus, and it will be passed in solution, or as an impalpable precipitate.

Medical Times and Gazette.

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38. *New method for the Cure of Aneurisms.* By M. PRAVAZ.

[M. Rayer read to the Academy of Sciences, (Jan. 10th,) a letter narrating the experiments of M. Pravaz, of Lyons, upon a new method of producing the coagulation of the blood in arteries. The experiments were made at the Veterinary School of Lyons, in presence of M. Lecoq, director of the school, and Professor Lallemand. The latter considered them very successful, and deserving of the attention he has called to them, by the letter to which we have referred.]

"The method which M. Pravaz proposes, in order to coagulate blood in the arteries, says M. Lallemand, consists in the injection of a few drops of the perchloride of iron at its maximum of concentration. The injection should be made through a very fine trocar of gold or platinum, introduced by a rotary movement, very obliquely to the walls of the vessel. A syringe should be adjusted to the canula, the piston of which should be moved by a screw, in order that the injection may be effected steadily, and that its amount may be accurately measured. It is necessary, moreover, to arrest the current of the blood momentarily, and to take certain other precautions, which will appear in the account given of the experiments.

"1. Upon a full grown sheep, the carotid artery having been laid bare, the circulation was arrested by pressure made by the thumb and index finger, upon two points about two inches apart. A spoonful of blood, perhaps, was intercepted in this space. A puncture was made and four drops of the perchloride of iron was injected. An increase in the density of the blood was immediately perceived by pressure with the finger; a clot appeared to form rapidly, and in four minutes all compression was removed. The clot did not change its position, and during eight days, it could be felt always at the same place.

"2. The experiment practiced in the same manner upon the carotid artery of a horse, gave a similar result. The portion of the vessel in which the circulation was suspended, was four inches in length, and might contain about five teaspoonsful of blood. Eight or ten drops of the salt of iron were injected, (M. Pravaz having ascertained that it is necessary to inject two drops in order to coagulate about a teaspoonful of blood.) Four minutes after, as in the first experiment, the clot was formed; it was hard, and was not displaced by the impulsion of the blood for 15 minutes. The portion of the artery experimented

upon, was then removed, and when it was opened, its internal surface was rough, and exhibited granulations and longituninal striæ, throughout the whole extent occupied by the clot.

"3. The same experiment was repeated upon another horse with identical results. Nevertheless the animal was preserved eight days, the artery being left bare, in order that the phenomena might be observed. It was found that the hardness of the carotid extended above and below the primitive clot. When the horse was sacrificed, the interior of the carotid exhibited three distinct clots, which obliterated the artery for the extent of eight inches. The middle clot corresponded to the point of injection; it was dark, nodulated, and an inch and a half in length.

"To conclude, after the injection of the perchloride of iron, four minutes have sufficed, in the sheep and horse, for the production in the carotid artery of a clot, sufficiently consistent and adherent to resist the impulse of the column of blood coming from the heart.

"Such, said M. Rayer, in conclusion, is the important fact, which M. Pravaz has demonstrated in the presence of MM. Lallemand and Lecoq. M. Pravaz continues his researches; he makes known these first results only to draw the attention of experimenters and practitioners to this method for the obliteration of arteries. Up to the present time, the researches of M. Pravaz have been purely experimental, instituted to discover the mode of action of the coagulating agent which he employs. For application to the cure of aneurisms, the procedure should be modified: the injection should be made into the aneurismal sac, after first arresting the circulation between the tumour and the capillaries.

Comptes-Rendus de l'Académie.

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39. *Injections of Iodine in Ascites.* By M. Boinet.

M. Boinet has examined the results of the practice proposed by Velpeau, and adopted by a few physicians, of injecting iodine into the cavity of the peritoneum in obstinate cases of ascites. Such a plan gives rise to questions in therapeutics too difficult to be easily decided. Deeply impressed with the difficulty of the subject, M. Boinet has not feared to encounter it. He has not yet mastered it; he has not yet demonstrated the absolute efficacy or innocuity of the method; but the cases which he has collected, his own observations, the experiments he has made, and the reasoning he advances, appear to be of a nature to justify renewed researches. The commission of the Academy of Sciences have thought proper, in consideration of the deep importance of the subject, to allow M. Boinet an "encouragement" of 1000 francs.

Revue Médicale de Cayol.

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40. *Injection of Iodine into Tumours.* By Dr. Gambiatt Borelli.

Borelli divides tumours, suitable to iodine injections, into two classes. 1. Sacs lined with *serous, synovial,* or mucous membrane. 2. Cavi-

ties, accidental, pathological, non-suppurating, or secondary after the process of suppuration. The first, ascites, hydrocele, ganglion, hydrarthrosis, ranula, and its varieties, he treats with a single injection. The second, cystic tumours, abscesses, fistulæ and their varieties, with repeated injections. He gives a number of cases of hydrocele in which the alcoholic tincture was used, either pure or diluted two-thirds or four-fifths with water. They prove that the diluted tincture was insufficient for the radical cure, and that the pure tincture only excited such inflammation as the case demanded. It is not certain whether the injection will cause the obliteration of the sac, or merely check hypersecretion. Dangerous consequences are not to be feared from this line of treatment, if undertaken with care. The alcoholic tincture exercises a powerful coagulating influence upon the plastic elements of the different animal fluids, (albumen and fibrin.)—*Gazz. Sard.*, 34, 35, 36; 1852.

(*Medical Times.*)

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41. *Treatment of Goitre by Electro-puncture.*

M. Jobert of the Hotel-Dieu is in the habit of treating goitre by electro-puncture. The operation is very simple; each of the conductors being furnished with a long needle, is plunged into the tumour, and the apparatus then charged. The operation is not very painful, and may be repeated every day. The tumour gradually loses its bulk and hardness. M. Jobert has been successful in many cases, and in some where this means is not effective or speedy enough, he injects iodine, which, after causing some inflammation, has the effect of causing resolution in the tumour, and curing it effectually.

Gazette des Hopitaux.

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42. *Inguinal Cystocele.* By M. Roux.

"I have recently operated upon a strangulated inguinal hernia of the right side, in which a portion of the bladder presented itself, as well as a loop of intestine. The presence of this viscus was only discovered at the operation. The rarity of this species of hernia, which I have never before encountered, the error which I committed, appear to me to make this observation a most interesting one.

"Last Friday a man was admitted into my ward, who had laboured under symptoms of strangulation for four days. The hernia was voluminous; it had existed from infancy. The patient had never used any means to keep the tumour reduced until he was twenty-one years of age. At that time having been exempted from conscription, he determined to wear a bandage, which never fulfilled the object for which it was designed.

"When I saw the patient, many efforts at reduction had been made. The man was in a perilous condition. I decided to do the operation *without farther delay.*

"The hernia was voluminous; upwards and outwards it had a prolongation which was quite hard; below and inwards it was softer. I operated with the greatest confidence, persuaded that I had to do with an ordinary hernia.

"The first steps of the operation were very simple. I arrived promptly at the strangulated gut, relieved the stricture, and reduced the intestine, which was in a satisfactory state and had contracted no adhesions.

"This done, I observed in the internal portion of the sac, a piece which I had not yet noticed. I thought it was omentum; its aspect was smooth and polished, some masses of fat were on its surface; by passing my finger around the base of this tumour, I found that it had not formed adhesions.

"I tried to reduce it. I succeeded partly, but as soon as the finger left the reduced portion, immediately it protruded again. More firmly persuaded than ever that it was omentum, I resolved to excise it, which was easy, for I could pinch the tumour between my fingers.

"I proceeded cautiously, but presently made an opening through which came a gush of urine; it was then only that I saw that it was a cystocele. I hastened to close the little wound I had made, and I dressed according to the rules.

"Notwithstanding the evacuations which occurred during the day, the symptoms of strangulation continued, and the patient died 26 hours after the operation."

The pathological specimen was carefully dissected by M. Roux, and he promised to present it at the next meeting of the society.

Fully half of the bladder was included in the sac. M. Roux thinks that the hernia had existed since childhood, at first small in bulk, but subsequently augmenting, and dragging with it the peritoneum and neighbouring parts. The walls of the bladder were not thickened. Hypertrophy of the muscular tissue was observed in only one spot.

So the congenital cystocele had here existed for many long years, occasionally accompanied by loops of intestine, without revealing its existence by any symptom, and even during the operation the presence of the bladder was not suspected. For the rest, said M. Roux, while I avow my error, I should add that I do not believe it contributed to the fatal result.

At the next meeting M. Roux presented the pathological specimen, saying that he had nothing to add to the details given at the previous meeting.

M. Morel remarked, that in this case there was no omentum in the hernial sac. In a case which he had observed there was a notable portion of omentum, besides the intestine and bladder; a complication noticed by no work on surgery. Moreover, there was strangulation of the bladder; the mucous membrane was almost gangrenous. A mistake was committed as in the case of M. Roux. It was believed, after the intestine had been reduced, that the tumour was formed by an hydrocele. It was left intact. The patient died. At the autopsy, the cystocele was discovered. The urachus had been dragged along with the bladder. During life, the patient had exhibited no symptoms of derangement of *the genito-urinary organs.*

"*M. Marjolin.* The observation which our honourable colleague M. le Prof. Roux has reported, is most instructive; for it proves to us, the great difficulties of diagnosis, in certain circumstances, even for the most experienced men. The autopsy has proven, in this case, the existence of an hernia complicated with cystocele. At first sight, it would appear that an error was impossible, and yet how much the contrary. Recall for a moment the curious fact communicated to us by M. Pytha, of Prague, and you will perceive in what embarrassments the surgeon may be involved in cases like these.

"The patient, seventy-five years of age, entered the hospital with all the signs of strangulated hernia. The symptoms had existed four days. The scrotal tumour was as large as a child's head. Moreover, the patient was tortured by complete retention of urine. The catheter brought away about four pints of urine, and efforts at taxis diminished the size of the tumour; but no relief was obtained. As the patient was in a hopeless condition, M. Pytha was unwilling to operate. I was present at the autopsy. What we first saw resembled closely the tumour of which M. Roux has spoken; only its volume was much greater. By compressing it, as it lay supported by the posterior wall of the hernial sac, and apparently continuous with the bladder, we could cause the urine to flow through the urethra. To all appearances this was a hernia of the bladder, yet in reality no cystocele existed, and it was only in opening the bladder that we discovered that an effusion into the peritoneum had taken place, in consequence of the detachment of a gangrenous eschar.

If the condition of the patient had justified an operation, and the surgeon had encountered this unexpected complication, it is probable that the only proper course would have been that from which we would all recoil; for it would have been necessary to freely incise the peritoneal tumour, as is done in urinary infiltration of the scrotum.

Bulletin de la Société de Chirurgie, Jan. 28th, 1853.

OPTHALMOLOGY.

43. *Application of Ice to the Eye after the operation for Cataract.*

M. Magne, at a late session of the Society of Practical Medicine of Paris, gave the history of five operations for cataract where all subsequent inflammation was avoided by the application of ice over the closed eye. His method is to apply the ice immediately after the operation, and to continue it for three or four days, or until all disposition to inflammatory reaction in the organ has been suppressed.

(*Gazette des Hopitaux.*)

44. *Case of Black Cataract.*

In May, 1851, M. Alessi attended an old woman, æt. 76, completely blind of the left eye, and scarcely capable of seeing her way with the right. The iris was of a dark or russet colour. The impairment of vision had commenced six years previously by a cloudiness which gradually increased. In the left eye, the iris was very sensible to the stimulus of light, though the patient could not at all distinguish objects, yet she suffered a little when exposed to very strong glare. The field of the pupil was quite black. By holding a light before it, one image only was reflected—viz., that caused by the reflexion from the cornea. A surgeon present at the examination, supposing that the case was one of amaurosis, Alessi directed his attention to the following facts:—1st, that none of the symptoms of amaurosis, such as spectra, headache, &c., were present; 2nd, that the iris was under the influence of light; 3rd, that when in a darkened room the patient could see much better than with bright light; 4th, that the dark appearance in the eye was of a dull dusky colour, which is not observed in amaurosis; 5th, finally, that an amaurotic eye reflects three images of a light placed before it. To complete the diagnosis, Alessi dilated the pupil with belladonna, and could perceive at the circumference of the lens two points, where the black tint was less marked, and which appeared like two little stains of a rusty colour.

On the 11th of May, the operation of extraction was performed. and a black cataract withdrawn. The fragments of capsule which came out after the lens were black, but much darker than it, which was of a reddish black. Since deprived of its capsule, and macerated in alcohol, the lens has in a great measure lost its dark colour, but at the time of operation, and when invested by its capsule, it resembled a flattened bay berry. Immediately after the operation, the patient could discern small objects. At the end of twenty-eight days she was quite well.—*Bulletino delle Science Médiche.*

The ghost of a black cataract has been haunting the study of the ophthalmologist time out of mind; never to be caught, and seldom to be perfectly seen. Here it is again, "the field of the pupil was quite dark," "the dark appearance was of a dull dusky colour," "a black tint," "a reddish black," "a dark colour," "which it lost by maceration in alcohol," and as like a "flattened bay berry" as a sea-serpent is like a whale.

Dublin Medical Press.

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45. *Sub-Conjunctival Opthalmia.*

The Chevalier Ammon, physician to the King of Saxony, reports (*Annales d' Oculiste*) a number of cases of inflammation of the sub-conjunctival cellular tissue. According to Ammon the disease is usually limited in extent, accompanied by pain and intolerance of light; the inflamed part is of a dull red, not unlike an ecchymosis of the conjunctiva, but *more transparent*. The disease is chronic, lasting

months rather than weeks, and relapses are frequent. The treatment consists in mild purgation and constitutional remedies. Collyria, especially solution of nitrate of silver, were always injurious.

Gazette des Hopitaux, Jan. 6th.

OBSTETRICS, &c.

46. *The Maternity Hospital at Berlin.*

Professor Busch gives in *Zeitschrift fur Geburtskunde*, a long report of the cases of parturition, occurring in the Berlin Hospital during five years, which contains some interesting statistical details.

The number of women delivered was 4,124. Of these sixty died during labour or shortly after. 58 had twins. Of the 4,182 children, 4,080 had reached the full term, of whom 262 were still-born. 102 were born prematurely. 185 died within three weeks after birth.

There were observed 3,846 presentations of the head, 26 of the face, 3 of the forehead, 98 of the breach, 63 of the feet, 2 of the knee, 83 which were completely irregular. 3,572 labours were accomplished without the assistance of art, 552 required the interference of the obstetrician. The forceps were employed in 358 cases; child extracted in 101 cases; rectification of irregular positions in 2 cases; version by the head in 14 cases; version by the feet in 75 cases; version by the pelvis in one case: induction of labour in 14 cases; cephalotomy in 14 cases; embryotomy in one case; cæsarian operation, in 2 cases during life, and in one after death; replacement of prolapsed cord in 9 cases; artificial detachment of placenta in 101 cases; incisions of the perineum in 3 cases.

Both of the patients subjected to the cæsarian operation died.

(*Gazette Médicale de Paris.*)

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47. *Chloroform in Midwifery.*

Dr. Simpson attributes to chloroform the singular property of acting as a prophylactic against puerperal mania. He recently communicated to the Obstetrical Society of Edinburgh, three observations relating to women who had been delivered under the influence of chloroform, with the happiest results; whereas after their previous accouchments, in which chloroform was not employed, unequivocal symptoms of puerperal mania were manifested. One of these women, the mother of a large family, had never escaped this distressing disease, in her former confinements.

48. *Relations of Menstruation, Conception and Lactation.*

[In an enquiry into some of the relations between menstruation, conception and lactation; and the influence of lactation in causing abortion, founded on an analysis of the histories of one hundred women, Dr. Robert Barnes arrives at the following conclusions:]

"First. Lactation exercises a considerable influence in preventing menstruation and conception.

Secondly. This influence appears to be marked and constant in some women, and to exist but feebly in others.

Thirdly. The influence of lactation in averting menstruation or conception, cannot for the most part be kept up longer than twelve months.

Fourthly. There is a close relation between the occurrence of menstruation during suckling and conception—*i. e.* when menstruation appears during suckling, conception is very likely to follow.

Fifthly. When pregnancy takes place during suckling, and suckling is continued, abortion is very apt to follow.

Sixthly. The chief causes of the abortions brought about during suckling, are the revolt of the ovaria and uterus, evinced by the return of the menstrual nisus, and the deterioration of the mother's blood; to which must be added, superinduced disease of the ovum.

Seventhly. The practical conclusion that weaning should be enjoined, not only whensoever pregnancy takes place, but also whensoever menstruation returns."

London Lancet, Feb. 1st.

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49. *A remarkable Case of Vicarious Menstruation.*

Mme. X., aged twenty-eight years, of nervous temperament, fell from her carriage, and her foot becoming entangled in the steps of the vehicle, she was dragged some twenty or thirty yards, causing severe contusion of the right leg. Either from untoward circumstances, or the dressing employed (starched bandage,) there supervened an immense, sloughing, gangrenous wound on the inside of the limb, above the knee. The catamenia appeared on the evening of the accident, though only ten days had elapsed since the regular period. Five months afterwards they had not reappeared, but what was remarkable, at each regular period the leg swelled to an unusual extent, the dressing being saturated with blood, and pus secreted in much larger quantity. It was evident that there was deviation of the menstrual flux, occurring periodically through the wound. This strange phenomenon was perplexing to the attendants, but its history proved beyond a doubt its vicarious character. In fact, during a subsequent catamenial period, the menstrual fluid accumulating with more abundance in the wound, caused the leg to swell enormously, and in escaping destroyed all that had been achieved in the way of cicatrisation. At each regular period afterwards the leg swelled, bloody tumours surrounded the wound; the hæmorrhage lasted for seven or eight days, sometimes fif-

teen; then the swelling subsiding, the leg recovered its ordinary volume, and the process of reparation again commenced. But whenever the menstrual period supervened, the swelling, tearing up of cicatrices, hæmorrhage, etc., were repeated. The patient underwent a treatment of more than twelve months, being reduced to the most precarious state by the copious discharges from the wound, when by the use of tonics, the martial preparations, &c., the catamenia were restored to their normal passages, the wound began progressively to heal, and the patient finally, though slowly recovered.

Arch. Belges de Méd.

LEGAL MEDICINE AND TOXICOLOGY.

50. *Two Cases of Poisoning by Colchicum.*

We read in the Medical Times, that an inquest was lately held by the coroner for Surrey, on the body of Mr. Clements, late master of the Mary, government Hoy. It appeared that on arriving at Deptford, he applied to Dr. Gunn, complaining of vomiting and violent pain in the stomach consequent upon his having taken something from a bottle he had with him. He continued in the same state and died next morning from exhaustion. Dr. Gunn produced the bottle, which contained, as the label denoted, tinct. sem. colchici. The deceased had informed his assistant, that he had taken a wine-glassful of the tincture. No colchicum could be discovered in the body.

The second case is reported by Dr. Broeckx, in the annals of the medical society of Antwerp. An old soldier of fine constitution was seized with intolerable pain in the abdomen, accompanied by vomiting and purging, a few hours after drinking a bottle of wine with a comrade, who had made the campaign in Russia with him, and had ever since suffered from rheumatism. Dr. Broeckx found the abdomen hard, not very sensitive upon pressure, the tongue red and dry, the thirst intense, the pulse small and accelerated, the skin dry and of normal temperature.

The comrade was requested to send the bottle from which the liquor had been used, and it was then found that a mistake had been committed, and that the liquor consisted of Schiedam gin, in which wild saffron had been macerated.

Notwithstanding the exhibition of iodine in solution, the use of emmolient drinks, of ice, of opium, of narcotic fomentations to the abdomen, the patient died on the following day, twenty-six hours after the ingestion of the poison.

The autopsy showed acute inflammation of the alimentary canal, the mucus membrane of the stomach being softened, and of a livid brown colour.

In his reflections upon this case, Dr. Broeckx states that his treatment was based upon the experiments of M. Donné, which proved that veratria, strychnia and brucia formed harmless compounds with iodine. Colchicina is closely analogous to veratria. Since these researches, most toxicologists have advised iodine in poisoning by the vegetable alkalies.

M. Bouchardat pronounces the treatment correct. "The iodide of potassium and iodine form, he says, (*Rép. de Phar.* 1853,) insoluble iodides and hydriodates of the vegetable alkalies." M. Caventou thinks this confidence exaggerated, and we find (*Revue Med.-Chir. de Malgaigne,*) an article from his pen, in which he lauds the properties of tannic acid as an antidote in these cases. In this he agrees with Taylor (*on Poisons, p.* 596, *Amer. Ed.*) "Tannin precipitates all the alkaloids: hence it has been strongly recommended as an antidote. No injury can follow its exhibition; and a strong decoction of tea is a good substitute for oak-bark or galls."

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51. *Case of Poisoning by Atropia—Recovery.*

The *Gazette des Hopitaux* gives an account of a case of poisoning by atropia, which is somewhat remarkable from the small quantity of the medicine employed, and the place of application, viz: the healthy conjunctiva. A patient in the hospital Saint-Antoine was labouring under double cataract, complicated with adhesions of the iris to the lens. In order to ascertain exactly the condition of the eyes, three or four drops of a solution, containing about one grain of atropine to two ounces of water acidulated with acetic acid, were instilled into each eye. Half an hour afterwards the patient suffered from vertigo and complained of disagreeable, unusual sensations; three quarters of an hour later he manifested all the symptoms of poisoning by belladonna, redness and animation of the face—pupils, though irregular, enormously dilated, incessant hallucinations, seizing the bed clothes, and grasping at objects in the air. He could not raise himself from his bed, nor advance a step without being supported, as his limbs trembled and gave way at every effort. Pulse full, and beating one hundred and twenty. These symptoms gradually passed off, but the patient did not recover his normal condition for three or four days afterwards. Being interrogated upon the delirium and hallucinations of the preceding days, he had only a vague recollection of what had passed.

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52. *Mortality in Prussia.*

From a memoir in the *Annales d'Hygiene Publique* for Jan. 1853, by M. Boudin, which is the second of a series upon the statistics of the population of Europe, we copy the following table, indicative of the general mortality of Prussia compared to the number of physicians.

It will be observed that the ratio of mortality has increased very nearly in proportion to the increase in the number of medical men, a fact by no means flattering to the profession in that country.

	No. of inhabitants for one physician.	No. of inhabitants for one death.		No. of inhabitants for one physician.	No. of inhabitants for one death.
1822,	2892	37.0	1837,	2928	32.1
1825,	2955	37.4	1840,	2990	35.6
1828,	2991	34.1	1843,	2876	34.8
1831,	3005	28.1	1846,	2832	34.0
1834,	3073	31.8	1849,	2787	32.7

On the other hand we find that at Bromberg, where there is only one physician to 5,751 inhabitants, the ratio of mortality is one in nineteen, whereas at Berlin where there is a physician for every 1,350 inhabitants, the ratio of mortality is only one in thirty-five.

EDITORIAL AND MISCELLANEOUS.

A STATE GENERAL HOSPITAL.

The praiseworthy efforts for an effectual organization of the Virginia Medical Society, to which the physicians throughout the state responded so cordially last year, lead us to cherish hopes that this institution may soon acquire the position and influence that it merits, and may become a powerful instrument of medical and sanitary reform.

We consider an association constituted as it is intended this shall be, the most appropriate body to furnish advice and information to the legislature and executive, on all questions concerning the physical welfare of our population, or to originate or decide upon all plans for the amelioration of the sanitary condition of different classes of the community.

It is with such views that the Medico-Chirurgical Society of Richmond recently appointed a committee to call the attention of the State Society to the abuses which exist in our system of medical jurisprudence; and that we now invite the same association to consider the necessity which exists for a nosocomial establishment adequate to the relief of the indigent sick of the state.

The various obstacles which must be surmounted before such an institution can be founded, arising from local jealousies, and individual ambition, and legislative parsimony, cannot make us blind to its importance; and this journal, which hopes to maintain its stand by its zeal for humanity and science, by its independence and avoidance of party feeling and personal ambition, will not cease to advocate this desirable object from time to time.

In establishing two large asylums for the insane, our legislature has shown a commendable liberality towards the most afflicted branch of the family of man; but why need their efforts for the relief of suffering humanity cease here? Who will refuse to applaud their munificence in this direction? Let them then, amid their ample expenditures for the development of the commercial and agricultural resources of the state, make an appropriation for a general hospital worthy of Virginia. Let them do this, and individual liberality will do the rest, and a rich reward will follow; for beside the succour to the afflicted, who have claims on us which we are not permitted to ignore, there will be

opened a field, where physicians and surgeons may be trained as they can be trained nowhere else, where young men who may hereafter devote themselves to medicine, may find the keys of knowledge to the great science of disease, not a barren theoretical knowledge, but a knowledge which may be made subservient to practical purposes, and for which they may claim honour of mankind, from a sense of the benefit they receive from it.

Such is the plan which we respectfully submit to the Virginia Medical Society, and we cannot believe that their time will be ill-employed, in devising means for founding what is rightly considered one of the noblest fruits of civilization and religion, an hospital for the relief of the suffering poor.

FUSEL OIL IN TUBERCULOSIS.

[We are permitted to publish the following letter from Dr. Morrill Wyman of Cambridge, in regard to the therapeutic properties of fusel oil. We hardly think M. Lebert would agree with Dr. Wyman in regard to the antagonism of cancer and tubercle, for he says: "Nous avons constaté plusieurs fois, d'une maniére non donteuse, la coincidence du cancer et du tubercule, sans que l'un ait pu exercer de l'influence sur la marche de l'autre."]

CAMBRIDGE, *July* 31*st*, 1852.

"I send you a bottle of fusel oil, of which I hope you will make trial. The diseases in which I have used it about a year and a half are tubercular affections of the lungs and scrofulous diseases generally. The dose is four or five drops three times daily, gradually increased to as large a quantity as the stomach will bear. It is most conveniently given in wine or other alcoholic liquor, with which it readily mixes. I have not thought it did as well with those who have a red tongue, or a tendency to diarrhœa, as with others. The results so far have led me to believe it has a tendency to suspend the action of tubercular disease. But of this I must leave you to judge, for I well know that in medicine 'experience is fallacious and judgement difficult,' and that correct inferences can seldom be drawn except from many cases.

"I was first led to make use of this oil from considering the well known fact that those in the habitual and excessive use of alcoholic drinks are not subject to tubercular disease in the same proportion as others. By careful enquiry I was also led to believe that it is the coarse alcoholic drinks which

are most remarkable for this protective quality; New England rum, 'rot-gut' whiskey in this country, and the fusel liquor of the north of Europe: those, in fact, which produce bloating and fattening.

"The most striking difference in the two classes of liquors is in the quantity of fusel oil contained in them, the coarse liquors containing much, the fine liquors very little; indeed the less they contain the smoother and less fiery they become. The coarse liquors produce in fact a disease which may have a power antagonistic to tubercular degeneration, just as measles and scarlet fever, or measles and typhoid fever, or cancer and phtisis are antagonistic. Thinking, therefore, that the protective power may exist in the fusel oil, I have administered it as a medicine."

MEDICAL LIFE IN LONDON.

"Sir Benjamin Brodie is the most learned man in the profession in London, but the man who has most enemies; Mr. Lawrence, perhaps, the most friends, without any boasted learning. Mr. Guthrie has done more for military surgery than any man who ever lived, and should now be at the head of the medical department of the army; but like Rory O'More's dreams, all our medical appointments here "go by contraries." The square pegs are ever getting into the round holes, and the round pegs into the square holes. Dr. Marshall Hall has been laughed at and ridiculed till it no longer "pays;" but his name is now known through the world, and his reputation, if he will only guard it safely, quite equal to Sir Charles Bell's. Men of a certain class deny any force to the excito-motor system of nerves, as Marshall Hall has not given a map and an anatomical description of them. The spinal cord is, no doubt, the centre of these actions. These men wilfully overlook the fact, but were poor Hall to have written from the swamps of the Lower Rhine, or from Vienna, and have a name no one could pronounce, the booksellers' shelves would groan with his discoveries. Few men of the present day can boast of such a strong masculine intellect as Mr. Skey. Sitting at the feet of his Gamaliel, whom he half worships, (Sir Benjamin Brodie,) the combined wisdom of these two great men is something indeed to think of. Mr. Skey laughs at all authorities of the olden time. Mr. South, on the other hand, with his placid mien and hair parted like a woman's, would frame and glaze the washing bills of the ancient surgeons; would revive *queues*, perpetual pills, red-hot amputating knives, and Ambrose Paré.

"Then there are others which in time will also prove useful, one way or another. Mr. Coulson, if he would only not aspirate his vowels, is invulnerable on the subject of lithotomy and lithotrity; Bence Jones at St. George's, who would turn everybody's brain he talks to into sulphurets and phosphates; Dr. Robert Lee from the wintry side of the Tweed, old fashioned, but marvellous in industry, with one arch enemy, Dr. Snow Beck, and one abiding fancy, uterine diseases; Locock, stern and unbending in practice; Bennett, fanciful, ever dreaming of the speculum; Golding Bird, insinuating, sharp, and puritanical, goes to church only five times on Sunday, but not to be approached as a good physician, especially in children's diseases; Fergusson, need we say, the *beau ideal* of a surgeon, simple, kind and gentlemanlike, without humbug; Bransby Cooper the same; Babington, Addison and Watson, the great pillars of medicine in England, without whom it would all tumble to the ground; Copland, not much known, but indefatigable, like the 'busy bee,' improving 'each shining hour,' &c.; at Bartholomew's, Lloyd, one of the 'illustrious unknown,' preferred by his friends to poor Sam Cooper as surgeon to that institution; Paget, the rival for Skey's place; and Skey adored and envied by every one: these all, no doubt, will be found in time among our 'representative men'—when some connecting influence is discovered to bring together all the good men in London now sadly distracted—when nepotism, practising chemists, and genteel starvation are at an end—when the College of Surgeons, like the Icthyosaurus or Dinornis is reconstructed and remodelled—when the College of Physicians is no longer like a set of genteel catacombs, but common sense and proper professional thinking the rule of life most tolerated and valued.

"For cheapness of living, agreeable society, and a thorough grounding in the various subjects that engage a student's four years, we unhesitatingly recommend Paris or Dublin; for utter sickness of soul, humbug, and insufficient teachers in various departments, we shall back London against the world. As a field for practice, we would say to every honest man leave your honesty at home. You will meet thousands of friends out of the profession: not one in it. Envy, bickerings, malice, and all uncharitableness, the well-recognized normal arrangement of everything and everybody. The Hunters and Harveys of to-day starving as of yore; the star of quackery, bad journalism, and colleges, the only one in the ascendant.

Dublin Medical Press, Jan. 5.

REVIEW.

1. *Traité complet des maladies vénériennes, clinique iconographique de l'hopital des Vénériens,* par M. RICORD, Paris. 4to. 44 fig., col. avec texte descriptif.
2. *Traité de la maladie vénérienne,* par J. HUNTER; *traduit de l'Anglais avec notes et additions,* par M. RICORD. 8vo. Paris. 1853.
3. *Lettres sur la Syphilis,* par M. RICORD. 8vo. pp. 282. Paris. 1851.
4. *Traité practique des maladies vénériennes contenant un chapitre sur la syphilization, et suivi d'un formulaire spécial,* par MM. MAISONNEUVE et MONTANIER. 8vo. pp. 580. Paris. 1853.
5. *Syphilitic Diseases: their Pathology, Diagnosis and Treatment, including Experimental Researches on Innoculation, &c.* By JOHN C. EGAN, M. D., M. R. I. A. 8vo. pp. 346. London: John Churchill. 1853.
6. *Syphilis, constitutional and hereditary, and on Syphilitic Eruptions.* By ERASMUS WILSON, F. R. S. 8vo. Philadelphia: Blanchard & Lea. 1852.
7. *Traité des maladies vénériennes,* par A. VIDAL, (de Cassis.) Avec planches gravées et colorieés. 1 vol. 8vo. pp. 600. Victor Masson: Paris. 1853.

The Academy of Medicine of Paris has appointed a committee to examine into and report upon the contagion of secondary syphilis, a subject which has engaged the attention of prominent men in Europe for some time past. Such a question would seem to suggest an easy solution, but, judging from the extent and terms of the discussion, it would have remained unsettled forever, except for the effective means of adjustment adopted by the academy. The tale of syphilis may be regarded like the famous one of the "three black crows," and, when reduced down to its real merits, will be found, like the latter, to have gathered a great many embellishments from being handed around. If all the chroniclers of the disease were entitled to equal consideration, their descriptions would leave us in the most profound mystery with regard to its true attributes, and unless we can ascribe to the malady, the metamorphoses of Proteus or the variations of a chameleon, we must discard most of the learned essays upon the subject, and study the disease over again—a task more satisfactory than to remain enveloped by a haze of theory through which the true light could never reach us. From the fifteenth century *down to the present* time, the subject has been rolled

through the pages of disquisition, until, like a snow-ball, constantly receiving additions foreign to it, the original nucleus is lost in the bulk of the envelope. From the sum total of these disquisitions, it would be very rational to conclude that syphilis was everything or nothing, just as the fancy might suggest. Here we are with more than three centuries experience, and if there be a treatise upon the disease worthy of reliance as a text, we have yet to meet with it. Hunter taught one view of the matter; Ricord teaches a very different one; Egan and Wilson, Waller and Cazenave have each a theory which to their minds explain all of the phenomena; it is a pity, after so much industry, that syphilis will not admit of them all. We are prone, however, to think that it has always been one and the same disease, even while the fecundity of authors finds matter enough in it to account for forty. It is folly, perhaps, to find fault with doctrines without being able to establish better ones in place of them; but we must regret the multiplicity and diversity of hypotheses presented in our day, as a source of sad perplexity to the practitioner, who must either rely upon his own observation, or draw with a timid hand upon precarious authority. One man following one author, gives mercury to cure the constitutional symptoms of syphilis after they appear; a second relying on the precepts of another author, gives it to prevent the invasion of such symptoms. If both be right, we are not surprised that the remedy has acquired the title of specific, not so much from its own virtues as the fact that it meets different indications for different reasons, and thus becomes universal in its application to the treatment of the disease.

With the question of contagion we are not disposed to meddle, as the decision of the academy's committee will place the matter beyond individual reprehension. But if they conclude in favour of contagion, he that invented the term *secondary syphilis* will be responsible for the error into which it has led. We had taken it to mean something that followed the primary disease after a lapse of time, and designating a vitiation of system; but, if it prove to be a poisonous, propagable condition, we have missed its purport. In the case of fermentation we have always regarded the fermented matter as a *product* not an *assimilation*, and never thought of associating it in property with the fermenting principle employed. So, with secondary syphilis, we considered it a product of the primary, essential disease, without regarding it as the same in character. Despite our convictions, the committee may prove secondary syphilis to be contagious. If so, we shall be lost in conjecture with regard to the attributes and the fate of the *tertiary* stage of the disease.

M. Ricord is the conspicuous leader of the doctrine of non-contagion, and being at the head of a large venereal hospital, and enjoying an extensive private practice, his opinions are certainly entitled to the highest respect. Much of his time has been appropriated to the accumulation of facts, and to systematising venereal diseases. His researches and experience lead him conclusively to declare that he has never by direct experiment or observation seen anything that would induce him to regard secondary syphilis as contagious; and while he is willing to respect the opinions of those who believe to the contrary, he cannot accept the examples upon which they build their faith, or *repeat anything they* claim in the way of experiment. The value of

these conclusions, we say, are entitled to the highest respect, because the experience of more than twenty years supports them, and M. Ricord has spared no pains in illustrating and explaining this important department of medicine. His "Notes on Hunter," his "Letters on Syphilis," and his last work, entitled, "A Complete Treatise on Venereal Diseases, with Clinical Illustrations from the Venereal Hospital," are eminent records of his industry, zeal and sagacity.

The Notes of the new edition of 1853 are probably the most complete embodiment of the "veritable doctrines of the *Hôpital du Midi*" now before the public. An able collaborator is now engaged in preparing a translation of them for the pages of this journal. The "letters on syphilis" first appeared in the columns of l'Union Medicale. They are composed in that easy and vivacious style which makes the author's lectures the most popular in Paris, but which borders occasionally on frivolity, and is pronounced by the graver critics beneath the dignity of scientific discussion. The "Letters" are by no means a complete exposition of Ricord's doctrines; they are a series of brilliant essays, full of powerful argument, and wit, and lively anecdote, in which many subjects are treated at length, while others of great importance are but slightly noticed. An edition of this work, with additions by Mr. Stapleton, has been published recently in England, and an indifferent translation, in which Ricord's lively wit appears clumsy and dismal indeed, has just appeared in this country. The two volumes of plates with descriptive text form a magnificent work, in which are collected and represented with striking fidelity the varied phenomena of what the author calls the Syphilitic Hydra.

MM. Maisonneuve and Montanier follow M. Ricord, and claim no other consideration for their work than is due to a generalization of his doctrines. The book contains a special formulary for syphilis and a chapter on syphilisation.

Dr. Egan's work is an exposition of his observation and experience from a long connexion with venereal hospitals. He agrees with Ricord in most essential points, but thinks that certain forms of gonorrhœa can contaminate the general system, since they may be followed by a secondary, generally papular, eruption. This, if substantiated, would, it seems to us, deprive Velpeau of his only argument in favour of the idea that the virus of gonorrhœa and that of syphilis are the same, and allow this Hunterian dogma to go into deserved oblivion.

Mr. Wilson's book is certainly a curiosity. He believes that secondary syphilis is contagious; that it is communicable through the medium of secretions; that scrofula is a syphilitic taint, and several other strange things. It is not for us to say under what obligations he has placed medical science by his new tenets, but certainly the swine ought to be very much obliged to him for exalting them in the scale of creation. We never knew before that syphilis was propagable among brutes, but inasmuch as hogs have most scrofula, they must at one time have had most syphilis, though we cannot account for its origin among them even by reviving the miracle of the swine that received the legion of devils, for we are assured that they were all choked in the waters of the sea.

M. Vidal combats the views which are generally received in regard to syphilis at the present day, supporting himself by observations collected in the service which he directs at the Hospital Lourcine (female venereal) and at the *Hôpital du Midi*, (male venereal,) for the last fifteen years. M. Vidal has adopted the old division of syphilis into primary and consecutive. He denies the invariable order of evolution of Hunter, and contends that the disease often commences by the symptoms called secondary and tertiary. Gonorrhœa according to the author is only a milder form of syphilis, and may be followed by constitutional infection. He rejects the abortive plan in its treatment, relying upon antiphlogistics, followed by balsams and astringents. In speaking of blennorrhagic orchitis, he details his method of treatment by free incisions of the tunica albuginea, and cites the favourable termination of 400 cases in support of it. His proceeding for the cure of bubo is also peculiar. After antiphogistics and topical emollients have failed, he makes numerous punctures, with a straight bistoury, to avoid the sloughing of the skin, and the extensive ulcerations resulting from the methods of cauterization and incision.

In the second part the author passes in review under the name of consecutive affections, the syphilides, syphilitic iritis, affections of the cellular and fibrous tissues, and diseases of bones and periosteum.

The third part is devoted to the diseases of new-born children. Here many observations of supposed transmission of secondary syphilis from the mother to her offspring, and from the infant to the nurse, are recorded.

The work concludes with an essay on private and public prophylaxis.

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1. *The Physical Diagnosis of Diseases of the Abdomen.* By EDWARD BALLARD, M. D. London: 1852. Pp. 276. Taylor, Walton & Maberly.

"Since the discovery of auscultation, says Watson, the diseases of the abdomen are much harder to discriminate than those of the thorax." All practitioners must have felt this more or less, and will be glad to meet with a work calculated to assist them in this difficult department of diagnosis.

Dr. Ballard's work is divided into Three Parts: The First treats of the modes of examining the abdomen by inspection, mensuration, palpation, percussion and auscultation. In the Second Part the diseases of the abdomen are discussed, and the physical signs of each are enumerated. In the Third Part, under the head of each physical sign, the author enumerates all of the pathological conditions which may give rise to it. For example; under the head of *inspection* the enlargements of different parts of the abdomen are arranged. Enlargement in the right iliac region may be caused by no less than twenty-three different conditions.

The book is carefully and methodically composed, and the more it is studied the more the valuable information it contains will be appreciated.

2. *Hand Book of Natural Philosophy and Astronomy.* By DION. LARDNER. Second course. Royal 12mo. Pp. 451. Philadelphia: 1853. Blanchard & Lea.

This part of Dr. Lardner's very valuable and complete treatise contains sections on heat, magnetism, common electricity and voltaic electricity, and is illustrated by upwards of two hundred engravings on wood.

The work furnishes a very clear and satisfactory account of our knowledge in the important department of science of which it treats. Although the medical schools of this country do not include the study of physics in their courses of instruction, yet no student or practitioner should be ignorant of its laws. Besides being of constant application in practice, such knowledge is of inestimable utility in facilitating the study of other branches of science. To students then, and to those who having already entered upon the active pursuits of business, are desirous to sustain and improve their knowledge of the general truths of natural philosophy, we can recommend this work as supplying in a clear and satisfactory manner the information they desire.

3. *Clinical Reports of Ovarian and Uterine Diseases.* With commentaries. By ROBERT LEE, M. D., F. R. S. Pp. 340. London: Churchill.

This work consists of five reports, embodying the results of the well-known author's extensive experience in public and private practice. The first report contains "observations upon the structure, functions and diseases of the ovaria," and the histories of one hundred and seventy cases. Dr. Lee is a mortal enemy of the new methods of exploring uterine tumours and ovarian cysts. He terms ovariotomy an "abomination," and observes that "the melancholy recital of its results is a striking warning" to surgeons to avoid the operation. Farther on he says:

"The diagnosis of fibrous tumours of the uterus and of ovarian cysts can be made with sufficient accuracy for all practical purposes, without the employment of that useless and dangerous instrument called the uterine sound or poker. I have seen this weapon on various occasions employed by those who are accustomed to its frequent use, and I never, in a single instance, observed any information derived from it, and, on several occasions, it has led to the commission of gross errors. After having been introduced into the cavity of the uterus, and attempts made to dilate the organ, or force it out of the cavity above the brim of the pelvis, [illegible] have been ineffectual, and the instrument has been withdrawn [illegible] blood. On more than one of these occasions I had no doubt [illegible] of the metallic probe had wounded the coats of the uterus."

Then follows an analysis of one hundred and [illegible] ovariotomy, which were published in the London [illegible] gical Transactions, and Dr. Lee says:

"That these cases will enable us to determine [illegible] contribute equally to the interests of humanity [illegible]

surgery, if this operation, which was facetiously termed 'belly ripping' by Robert Liston, were wholly abandoned."

The second report is devoted to "malformations of the uterus, the diagnosis of diseases of the uterus and of the fallopian tubes, and the use of speculum." Dr. Lee seizes every opportunity to censure, the abuse, as he calls it, of the speculum, and he inserts in this report his well known "counter-blast" to that instrument, in the form of a paper read to the Medico-Chirurgical Society in 1850. He is no believer in the frequency of the "engorgement and chronic inflammation of the neck of the womb," which some pathologists, Bennett most forcibly of all, assert to be the frequent causes of uterine diseases.

"The syphilitic wards of the hospitals of Paris have been visited by men equally ignorant of the anatomy, physiology and pathology of the uterus; and the fruits there reaped have been reproduced in this country in a variety of forms. Nearly half the women in Great Britain, married and unmarried, rich and poor, virtuous and vicious, have been declared by some recent writers to be afflicted with the most disgusting diseases—engorgements, indurations, ulcerations, erosions of the os and cervix uteri, which can only be discovered with the speculum and cured by caustic."

The author condemns with equal severity some of the methods for curing displacements of the womb. The stem pessary which has been used advantageously by Simpson, and which is adopted by Valleix, is designated by Dr. Lee, "the 'impaling uterine machine,' analogous to the strange rusty ring and prong, generally called the 'infernal uterine machine.'" The instrument here referred to was a ring pessary provided with a stem, humorously described in the Lancet a few years ago.

"Several distinguished physicians and accoucheurs examined this machine, and expressed different opinions in regard to it. One thought from the black, corroded state of the metal, that it was some strange instrument used by the ancients, which had lain buried many centuries in Herculaneum or Pompeii, or had been recently dug out of the ruins of Nineveh. Another considered it some foreign invention for inducing criminal abortion, and wished it to be designated the infernal uterine machine. A third, from the hidden spring introduced into its construction, thought it was a man-trap, contrived for the purpose of catching those who were disposed to trespass on their neighbour's premises. A fourth, a very distinguished surgeon, said it must have reference to the mouth, and he had no doubt that it was a gag or instrument of torture. It did not occur to any one that such a heavy ring and prong could ever have been introduced into the vegina, for any lawful purpose."

The third report is on fibrous tumours and polypi of the uterus, with a history of fifty cases.

The fourth report is on cancerous diseases of the uterus, and contains little of novelty or interest.

The fifth report contains observations upon the pathology of the vagina and urethra, with cases; and is in many parts extremely interesting.

The work abounds in practical suggestions, and while we cannot admire the spirit which appears to dictate many passages of it, yet we can assure those who may purchase it, that they will find amusement *and instruction in its* perusal.

4. *A System of Operatic Surgery based upon the Practice of Surgeons in the United States, and comprising a Bibliographical Index and Historical Record of many of their Operations, for a period of* 200 *years—Illustrated by numerous steel plates.* By HENRY H. SMITH, M. D. Philadelphia: Lippincott, Grambo & Co. 1852.

Dr. Smith has certainly succeeded in offering to the profession a very voluminous work. We recollect him as the author of a book, entitled "Smith's Minor Surgery," and in view of that title suppose we can call this "Smith's Major Surgery," if for no other reason than on account of its dimensions. We are not disposed to explore so uninviting a field to find out to whom the material properly appertains. We have always regarded his first work as a reprint of "Cutler on Bandaging," and from our casual examination of this, we are disposed to believe that the author's appetite for appropriating the labours of others has remained undiminished. The publishers have issued the work in a most creditable style, and the engravers have copied the beautiful plates of Bernard and Huette with accuracy and care. As manuals of reference for the details of practical surgery, we must still recommend the classical works of Velpeau or Malgaigne, or the excellent text-book of Fergusson, however much our patriotism may incline us to prefer an American production.

5. *What to observe at the Bed-side, and after Death in Medical Cases.* Published under the authority of the London Medical Society of Observation. Blanchard & Lea: Philadelphia: 1853.

This is the first publication issued by this society, which is an association intended to "exhibit the special advantages which may accrue to the science of medicine by the co-operation of several persons, working on a uniform plan, towards the elucidation of given medical questions;" and this work is intended as a guide to those who desire to "learn systematically" and to "record with accuracy the results of their experience."

Several hundred directions are contained in the work in regard to the method of clinical examinations, and under each a number of specifications are given; so that few medical men ever have the time or opportunity for conducting an examination of a single patient according to this thorough and systematic plan. The phenomena having been thus zealously investigated, and the patient having died from exhaustion, a similar catalogue is presented for the guidance of the post-mortem examination. We fear that there are few physicians who will ever comply with the directions of the authors of "what to observe at the bed-side," or who will ever derive any instruction from a perusal of this book.

6. *A Discourse on the Life, Character and Services of Daniel Drake, M. D.* Delivered, by request, before the faculty and medical students of the University of Louisville, January 27, 1853, by S. D. Gross, M. D.

The above discourse, in pamphlet form, is before us. Those who knew Dr. Drake, and know Dr. Gross, will require no invitation to peruse this *just tribute paid to a man*, who was an honour to his profession, *by a friend whose ability is so* universally acknowledged.

ADDENDA.

Our thanks are due to those Editors who have courteously sent us their journals, while our own was yet in prospective; and also to those who have published our Prospectus with favourable comment. We gratefully acknowledge this kind reception on the part of the editorial fraternity, and cordially reciprocate the kind expressions which have been used towards us.

The first number of our Journal will be sent to many physicians, who have been represented to us as favouring our enterprise, but who have not intimated their desire to subscribe. Those who may receive it, will confer a favour upon us by circulating it among their acquaintances, unless they wish to become subscribers themselves.

We have received a note from the Dean of the Medical Faculty, informing us that a new professorship has been established in Hampden Sidney Medical College, to which the subjects of Physiology and Medical Jurisprudence has been assigned. This indicates a most praiseworthy desire on the part of the Faculty to increase the advantages of their institution. In no department has Medical Science made more rapid advancement, of late years, than in Physiology. Chemistry, the microscope, and experiments on living animals have here been conspicuously useful. The men who have mastered the subject are rare, but we trust that one will be found, and that he will prove a powerful auxiliary to the school.

NECROLOGY.

JONATHAN PEREIRA, M. D., F. R. S. January 20th, 1853.

GEORGE GREGORY, M. D., Professor of Practical Medicine at St. Thomas' Hospital, London.

WILLIAM E. HORNER, M. D., Professor of Anatomy in the University of Pennsylvania. March 12th.

ANDRAL, (Father of the Professor,) Ex-Physician of King Murat. January.

ORFILA, Ex-Dean of the Faculty of Medicine of Paris. Founder of the Science of Toxicology. March.

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL

FOR MAY 1853.

ART. I.—*A Translation of Doctor Philip Ricord's Notes, contained in the following Work: "Traité de la Maladie Vénérienne, par J. Hunter, traduit de l'anglais par le docteur G. Richelôt, avec des notes et des additions par le Docteur Ph. Ricord, chirurgien de de l'hôpital des Vénériens de Paris, chirurgien consultant du dispensaire de salubrité publique, membre de l'Académie nationale de médecine, et de plusieurs sociétés savantes française et etrangére. Deuxième édition, revue, corrigée et augmentée, Paris.* 1852." By F. J. BUMSTEAD, M. D., New York.

PREFACE BY THE TRANSLATOR.

One of the brightest names in the history of medical science of the present century is that of Philip Ricord.

His successful labours in the investigation of syphilitic diseases are known to the world, and the light which he has thrown on this subject is of itself enough to place him high in the ranks of men of science. But there is a wider and juster view to be taken of Ricord. A true estimate of him rests not only upon the facts that he has discovered in one speciality of our profession, but includes the philosophic spirit with which he has prosecuted his researches, and the lesson he has thereby taught all medical men. He is an example of one, who, while he knows and respects the early teachers of our art, does not allow himself to be blindly led by them; he enters on his labours with that sceptical spirit, which, whatever it may be in religion, is a

sine quâ non for success in scientific investigations; his object is truth, and he seeks it over the ruins of whatever theories may stand in his way, whoever were their authors. His is an example of a master mind, which collects and arranges facts that have long been lying scattered and useless before the world; he denies none that are well authenticated; he beautifully accords their apparent discrepancies and contradictions; he weaves them all into one harmonious system, and then, in the true spirit of Baconian philosophy, applies to it the touchstone of careful experiment and observation.

Like other philosophers before him, Ricord meets with many unbelievers and opponents. National jealousies and personal animosities are still the bane of science; the English Channel still tosses between France and England; the Rhine still flows beneath the Vosges; and the Alps still rise between Paris and Turin. Moreover there are men who have pinned their faith to Abernethy, Hunter and Home, and who are willing to admit nothing which their writings do not sanction. There are others who have met with an apparently contradictory fact in their limited experience; and no weight of testimony to the contrary is sufficient to make them suspect the accuracy of their previous observation. Such is the world, and such it will probably ever be; but truth, however long depressed, will at last rise buoyant to the surface.

We have not sufficient space to give the life of Ricord at length. He was born at Baltimore, December 10th, 1800, of French parents. In early life he was devoted to Natural History, and made several voyages to South America to collect specimens. He began the study of medicine in Philadelphia in 1819, but left for Paris in 1820, where he prosecuted his studies, as interne, under Dupuytren, and graduated in 1826. Since 1831 he has been surgeon of the Hôpital du Midi, at Paris.

Ricord still preserves an attachment to this country of his birth, as his special kindness to all Americans in Paris shows. Those who have followed him in his cliniques, and heard his lectures under the trees of the court yard of the Hôpital du Midi, can testify to his indefatigable industry, to his zeal in the pursuit of science, and to his charming and winning manners, which attach to him all who know him. As an instance of his industry, it may be mentioned that his "letters" were chiefly written in his carriage as he was making his visits about Paris.

The principal works which Ricord has published are:

Traité Pratique des Maladies Vénériennes; Paris, 1838.

Clinique Iconographique de l'Hôpital des Vénériens; Paris, 1842-*1851.*

Lettres sur la Syphilis; Paris, 1851-2. And, lastly, the notes of which this article is a translation.

He has pursued his investigations to such an extent since the publication of the first mentioned work that it is no longer up to the times. His "Clinique" is an atlas of the most interesting cases met with in the Hôpital du Midi. The only recent expression of his views are his letters and his notes to Hunter. The former have been translated and published in this country. They were written especially with reference to the doctrine of syphilization, which has been promulgated and advocated by Dr. Turenne, Dr. Sperino of Turin, and others, and are complete on all that can bear upon that question. But the only work which contains his views generally on gonorrhœa and syphilis down to the present time, is this edition of Hunter. In Paris it is sought after and read, more for the sake of Ricord's notes, than for the original text of Hunter. I propose to translate these notes in the pages of this journal.

It will be seen that they must appear somewhat disconnected when taken alone, unless the reader is familiar with the order of arrangement in Hunter's work. To obviate this inconvenience in a measure, I shall, where it is necessary, preface Ricord's remarks with an abstract of Hunter's views, expressed in the form of an aphorism, and as nearly as possible in Hunter's words. If there should still appear to be any want of arrangement, I am confident that the value of the notes will not be diminished; for each will be in itself a complete expression of some result of Ricord's experience; and the whole will comprise that portion of the present knowledge on this interesting subject which is in advance of Hunter's time.

I will only add that Dr. Babington, to whose notes reference is made in the following pages, edited this work of Hunter's in 1835. His edition has been republished in Philadelphia.

RICORD'S NOTES TO HUNTER.

The second section of Hunter's Introduction treats:

"*Of Morbid Actions being incompatible with each other.*"

HUNTER. "It appears to me, beyond a doubt, that no two actions can take place in the same constitution, or in the same part, at one and the same time."

P. RICORD. Hunter does not believe in the possibility of the simultaneous existence of two distinct morbid actions in the same part. This doctrine *of Hunter's, taken literally*, would be a very serious

error. Our daily practice presents individuals affected at the same time with scabies, and primary or constitutional syphilis; also with scurvy or scrofula, and syphilitic symptoms. There are cases in which there is no "pocky itch," properly so called, no syphilitic scurvy or scrofula, but a complication of two concomitant affections, which singly or together assume an acute form. Moreover we meet with numerous cases in which scrofula, an herpetic or dartrous diathesis, or scurvy, impresses upon the syphilitic symptoms a peculiar stamp, in which we are forced to recognize a combination of these morbid causes, acting together on the same region and on the same tissues.

If Hunter's doctrine can be sustained, with regard to acute and especially febrile affections, where, by the laws of revulsion, the stronger disease may obstruct the march of, or suspend, the feebler; it is often false in diseases analogous to syphilis. There is no disease which is an absolute protection against contracting syphilis: and the latter, in turn, cannot, while it lasts, protect against any other, if it be not against a new constitutional syphilis.

"The Venereal Poison began in the Human Race and in the Parts of Generation."

HUNTER. "In whatever manner it arose, it certainly began in the human race, as we know no other animal that is capable of being affected with this poison."

P. RICORD. Hunter's opinion appears to be correct. I have attempted to inoculate, with syphilitic pus, taken under every condition possible, dogs, cats, rabbits, guinea-pigs and pigeons, which, it has been asserted, are soon killed by the absorption of the virus. In no case, in spite of the variety of my experiments, has it been possible to communicate the disease. Some persons have lately succeeded, after numerous failures, in inoculating primary symptoms (*non-indurated* chancres) upon various animals, monkeys, cats, &c., and then inoculating man from these animals; but without the production of buboes or secondary symptoms. But this is not syphilis!

We must not, as the physiological school has done in later times, confound simple ulcerations, and catarrhal affections, to which animals are subject as well as man, with true syphilis; nor primary with secondary symptoms.

"Of the Nature of the Poison."

HUNTER. "The venereal disease is to be propagated only by matter. Without the formation of matter no venereal poison can exist."

Hunter draws two conclusions from this doctrine:

I. Before the discharge appears, infected persons may be allowed to have sexual intercourse.

II. A man with a gonorrhœa may have connexion with a healthy

woman, "provided that great care be taken to clear all the parts of any matter."

Mr. Babington in a note endeavours "to throw doubts on the truth of this doctrine;" and concludes with the following remarkable passage: "Cases might be multiplied without difficulty, which almost necessarily lead to the inference, that infection may take place from the contact of a simple chancrous thickening, although no ulceration whatever is present."

P. Ricord. Hunter's proposition is entirely true: no syphilitic virus is produced without suppuration; and no contagion is possible without virulent pus. I rely on the infallible evidence of my experiments, when I assert that no surface which is not smeared with virulent pus, or which secretes none during the sexual act, can ever communicate syphilis. But, following out this doctrine, we cannot, as Hunter did, allow intercourse to a patient with the use of lotions as the sole guarantee against infection; for the morbid secretion is incessant, and becomes more active from the increased vitality which takes place in sexual intercourse. But before all suppuration, and without its development during the sexual act, can the disease be communicated? No; indubitably no. There must be virulent pus; the quantity may be very small and pass unseen by the patient in the early stage; but no effect can be produced without it. To be convinced of the truth of these assertions, follow the results of artificial inoculation. Often on the second day the budding pustule already furnishes contagious pus, but in quantities so minute that if it were concealed in the urethra or vagina, the most careful observation of the patient's linen or of the external parts of the affected organs would discover nothing. Again it is well known how little of this pus on the point of a lancet is sufficient to communicate the disease.

Does an induration without suppuration, or the perfect cicatrix of a chancre, allow the communication of syphilis, as Mr. Babington asserts? His observations are founded on female morality, and on the supposition in every case, that the disease could have been communicated to the wives only through their husbands.

The following are the results that a different observation of facts has taught me:

Chancres may be developed in a follicle, in the cellular tissue, or in the superficial lymphatic vessels, and be accompanied by surrounding induration, which encloses them in a kind of shell or cyst. Under these circumstances they may appear to be simple indurations without suppuration; whilst, during sexual intercourse, the walls of the abscess gape, the pus escapes and communicates the disease, which is wrongfully attributed to a consecutive ulceration. These cases are common, and I have shown a large number of them at my clinique. But in every case that the induration was complete, and free from primary pus shut up within, if, from any cause succeeding ulcerations or mechanical lesions ensued upon the induration, without new infection, the pus then furnished was never inoculable.

However, in any case, in which there remain any suspicious symptoms, and if *there is any uncertainty* as to the cicatrix being perfect,

or any possibility of any hidden points of suppuration, it is necessary to abstain from sexual intercourse and especially from marriage.

Women can communicate syphilis only when they are actually infected with it. When they have been supposed to communicate the disease, without offering any trace of it themselves, it is because their symptoms were deep seated and concealed from view, and not discovered for the want of a speculum examination; or else, having had previous connexion with infected men, they harboured for a time in their organs virulent pus, which they subsequently communicated to others, without becoming sick themselves.

"Of the Poison being the same in Gonorrhœa and in Chancre."

Hunter believed that the poison in gonorrhœa was the same as in syphilis, and that the difference in the manifestations of the two was owing to the nature of the affected tissues; secreting surfaces being adapted to gonorrhœa alone, and non-secreting surfaces to syphilis.

P. Ricord. The question has been long discussed, and is still discussed at the present day, whether gonorrhœa is identical with syphilis in its cause and general effects, differing from it only in its primary form, owing to the peculiar locality and the anatomical and physiological nature of the tissues which it affects.

It must be confessed, that, in spite of the numerous works which have been written to solve this interesting problem, at the head of which, since the time of Tode,* I rank the remarkable work of Hernandez, which in 1810 received the prize before the *Société Médicale de Besançon;* no solution which has satisfied every mind has been attained. Facts calculated to throw light on this question, and experiments capable of solving it, have not, however, been wanting; but the systematic spirit, which has ruled the observations of some men, and falsely guided others, has of necessity conducted, in most cases, to erroneous conclusions. Authors have found it often necessary to evade a contradictory case, to suspect the good faith of an opponent, or even to expressly deny a fact; the work of Hernandez, the most complete on this subject, is an example.

For my part, I find the most weighty arguments in the absolute agreement of all these writers, and in admitting, without exception, the materials which they have furnished; for a fact is a material thing that cannot be destroyed, but a good explanation may destroy false explanations.

Hunter inoculated gonorrhœal pus and produced a chancre, followed by its characteristic constitutional symptoms. Harrisson conveyed pus from a chancre, by means of a sound, into the urethra, and produced a clap, whence it has been concluded that the cause of the two is identical. On the other hand, Tode and Duncan, as in the experiments reported by Bell, have never succeeded in producing a chancre with gonorrhœal matter; whilst pus from a chancre introduced into the urethra was followed by a chancre in that canal; which facts have, of

* *[Tode, J. C. über die Erkenntniss und Heilung des Trippers. Koppenh. und Leipzig. 1790. 800.]* F. J. B.

necessity, led them to admit a difference in the intimate nature of the two diseases. And yet all these experiments are true, although contradictory; for their difference is only apparent and dependent upon an erroneous interpretation.

In order to draw a rigorous conclusion from facts, we must neglect no circumstance connected with them. Every time that experimenters, to whatever school belonging, have taken pus from the surface of a chancre, and have applied it to a surface which was exposed to direct observation, they have produced chancres. It is only then, when the morbid matter was derived from deeply hidden parts, the actual condition of whose tissue could not be directly observed, or when virus was implanted in such parts, that results have appeared different and conclusions opposed. We find no experimenter asserting that muco-pus taken from a gonorrhœal ophthalmia, or from a non-ulcerous balanitis, and inoculated upon the skin or any visible mucous surface, has given rise to a chancre. M. Puche's cases of inoculation of the muco-pus of a balano-posthitis,* that were thought contradictory, have been withdrawn by M. Puche himself, after farther experiments more carefully made. On the other hand, when pus from a chancre has been properly inoculated, on any of the tissues whatever, without exception, it has, of necessity, produced a chancre; and when a gonorrhœa alone has seemed to follow its application to mucous surfaces, one of two things was true: either, as I have elsewhere said, the pus did not act specifically, and gave rise only to a catarrhal affection, which, in its turn, was incapable of inoculation; or else the chancre, which was produced, escaped observation from its situation, and furnished externally a discharge, which was mistaken for a clap.

The following is a summary of the results of my experiments and observations, collected during a period of more than twenty years:

I. Every time that muco-pus is taken from a non-ulcerated surface, whatever the previous symptoms may have been, as to the seat of the disease, its duration, or its degree of intensity; the results of its artificial inoculation are negative, on whatever tissue the experiment is made.

II. The existence of a mere ulceration, without distinction of kind, upon mucous surfaces affected with a running, is not sufficient to produce a chancre. A clap, like any other inflammation, may induce simple ulceration of the tissues which it affects; but to produce a chancre, there must be pus from a chancre in the stage of its specific progress.

III. When I take muco-pus, or pure pus, from a mucous surface that I have not previously explored, and am able to obtain positive results by inoculation, I am forced to infer the existence of a concealed chancre. This rational diagnosis is always verified in woman by means of the speculum, which in these cases never fails to reveal the chancre. In man, by separating the lips of the meatus, it is often easy to see the specific ulcer at a greater or less depth in the urethra. At other times, too deeply situated to be seen, the chancre only shows itself externally by the development of an induration of greater or less extent, or by perforating the canal and involving the external parts.

* [Inflammation of the mucous membrane of the gland, and of the internal surface of the prepuce.] F. J. B.

And, lastly, pathological anatomy has added a final argument, which ought to carry conviction with it. I have shown to the Academy of Medicine two urethras taken from patients who died with symptoms of gonorrhœa, and in whom I diagnosed urethral chancres. As the autopsy proved, both had chancres at different depths, and one of them even in the bladder.

IV. Deeply seated chancres of the vagina and uterus are more common than deeply seated chancres of the urethra; and the latter are found more frequently in women than in men. We see also—and this accords with what authors say—more women than men with pretended claps communicate chancres; and in women much more than in men constitutional symptoms occur preceded only by a running, whose source has not been explored.

V. The occurrence of secondary symptoms in man, as a sequence of a gonorrhœal discharge, is still rarer than the occurrence of urethral chancre; since every chancre, whatever its seat, does not of necessity cause syphilitic infection of the system.

VI. There does not exist a single authentic fact in science, which proves that an individual, whose mucous membrane has been open to inspection during the course of a gonorrhœal attack, without being complicated with chancre, has afterwards shown any symptoms of constitutional syphilis.

VII. There are not two kinds of gonorrhœa, the one virulent and the other mild; differing only in the nature of their cause, the quality of their secretion, and their possible consequences, but *without any difference in the changes produced upon the primarily affected tissues.* What authors have called virulent gonorrhœa, is only a chancre concealed in the urethra, vagina, &c., recognizing necessarily a specific cause, assuming often the appearance of a gonorrhœal discharge, but existing only in virtue of an ulceration, which alone can give rise to constitutional infection. No exception to this rule can be deduced from facts rigorously observed.

Since my experiments, the difference in form and effect between gonorrhœa and chancre can no longer be sought for, either:

1. In the nature of the tissues, as Hunter supposed, who thought that a secreting surface was only adapted to gonorrhœa, whilst non-secreting surfaces were suited to the development of a chancre; or,

2. In a difference of intensity in the action of the specific cause. For here, whilst Swediaur says that a too powerful action of the virus produces a running, which, protecting the surface, prevents ulceration, the absorption of the virus and the constitutional effects; M. Lagneau maintains the contrary opinion, and regards gonorrhœa as only a superficial effect of the venereal virus, which, in this case, is insufficient to produce a chancre; he believes too that the virus *requires the neighbouring surfaces to be intact in order to be absorbed by them;* or,

3. In idiosyncracies, as Thomas Rose does; or,

4. As Hufeland does, in certain conditions of the virus; free in chancre; and confined in gonorrhœa by a covering of mucus, which, *isolating it from the surfaces which secrete it, prevents them from ulcerating.*

At the present day *inoculation* has proved that gonorrhœa and chancre are two distinct diseases: it alone constitutes the pathognomonic sign between two affections, which it is more important to distinguish than Hunter supposed.

"*Of the causes of the Poisonous Quality—Fermentation—Action.*"

HUNTER. "The effects produced by venereal poison appear to me to arise from its peculiar or specific irritation, joined with the aptness of the living principle to be irritated by such a cause, and the parts so irritated acting accordingly."

P. RICORD. The intrinsic nature of the venereal virus is certainly unknown, and also the intimate modifications which it causes in the tissues which it affects and which reproduce it. It is indisputably true that it does not owe its origin to any alteration which the secreted pus undergoes; but to a particular state of the tissues. Thus, if you excise a chancre, and remove the whole ulcerated surface, you sometimes see a new chancre succeed the first, although you may have cut in the non-suppurating tissues; provided, however, that your section was not made at too great a distance from the part which was first contaminated.

"*The mode of Venereal Infection.*"

P. RICORD. The infection of nurses by children, and children by nurses, is perhaps one of the most interesting questions connected with the propagation of syphilis, and one which we are called upon to answer every day.

I believe, with Hunter, that children can communicate only the primary affection (chancre) which they may have contracted either during delivery or after birth. Since the first edition of this work no incontestible observation to the contrary has appeared; and M. Cullierier, Surgeon to the Lourcine Hospital,* has lately read an interesting paper before the Academy of Medicine in support of this opinion.

"*Of Gonorrhœa.*"

HUNTER. "When an irritating matter of any kind is applied to a secreting surface, it increases that secretion, and changes it from its natural state (whatever that be) to some other. This in the present disease is pus."

P. RICORD. For a long time it was believed that the discharge in gonorrhœa was composed only of pus. Hence, Mayerne, (Syntagmata praxeos, London, 1690,) who attributed it to an ulceration of the canal, gave it the name of πυρρια. It is now known that these discharges consist of a mixture of pus and mucus; to which I have given the

* [Hôpital Lourcine, Paris. The patients are composed only of public prostitutes affected with syphilitic diseases.] *F. J. B.*

name of muco-pus: this renders the term *blenorrhagia*, (βλεννα, mucus,) invented by Swediaur, as incorrect as that of Mayerne, since it is no more pure mucus than pure pus.

When discharges, reckoned blenorrhagic, the results of the inflammation of mucous membranes, are studied with care, it is found that the more intense the inflammation is, and the deeper it penetrates into the interstitial sub-mucous cellular tissue, the larger proportion do the pus globules bear to the mucous element; and when the secretion comes from a neighbouring abscess, or from an ulcer of the mucous membrane, the mucus may be entirely wanting.

In this paragraph of Hunter's, which is so admirably calculated to prove that chancre and gonorrhœa are two different diseases, we see what vain efforts he makes to prove that the mucous membrane of the urethra is incapable of ulceration, although he gives an instance of it himself.

Like all the other mucous membranes, that of the urethra may be the seat of ulcers, under the influence either of a chancre or of a simple inflammation; and if Hunter thought that he never met with ulcerations in this canal, Astruc, Frank, Bell, Wiseman, Howard, Capuron, Spangenberg, Swediaur, Thomas Bartholin, Teytaud, Lisfranc, and myself, have found them at different depths.

"*Of the Time between the Application of the Poison and the Effect.*"

P. Ricord. The incubation of contagious diseases, and especially of syphilis, is generally admitted; and is even regarded as peculiar to these affections. But experiments do not permit us to admit incubation of the primary ulcers of syphilis. There is not, as has been asserted, a time intervening between the application of the cause and its first effects. The moment that the virus is deposited in the tissues under the necessary conditions for contagion to take place, its action begins and produces its phenomena with a more or less rapid evolution.

In a word, as any one may convince himself by the artificial inoculation of chancre, there is no more incubation after the insertion of virulent pus, under the epidermis, than after a thorn planted in the flesh; and the chancre is produced in the first case by a gradual process, just as the abscess is formed in the second, after the necessary time for suppuration. No bronchitis, pneumonia, or phlegmon, arrives at the suppurative period, immediately after the action of the causes which were concerned in its development.

Since a clap may be due to other causes than sexual intercourse, we should give but little weight to observations, selected to prove the existence of a period of incubation, in which the disease appeared a very long time after the suspected sexual act.

Hunter. "I doubt very much the possibility of a person getting a fresh gonorrhœa while he has that disease, or of his increasing the same by the application of fresh matter of its own kind."

P. Ricord. This assertion is too contrary to daily observation to *allow it to pass* without refutation. The contrary may be proved,

viz.: the more frequent have been the attacks of gonorrhœa the more easily is the disease contracted anew; and the succeeding infection is developed with the more ease and rapidity in proportion to the traces remaining of the previous attack. It is well known that the most common cause of relapse in gonorrhœa, is the too hasty repetition of sexual intercourse before the cure is perfect, and even before convalescence commences.

HUNTER. "Most people have their first gonorrhœa the most severe, and the succeeding ones generally become milder and milder, till the danger of infection almost vanishes."

P. RICORD. We find many more patients who complain of not being able to touch a woman without suffering a relapse, than we find in the opposite condition. Most men, who are prevented by a foolish confidence or by their good nature, from accusing the women who have made them sick again, attribute to their first attack all those which follow; and this idea is so general, that some men believe in a relapse even after an interval of years; but this is, in most cases, only a fancy.

It is true that the more frequently attacks of gonorrhœa occur in the same individual the less pain do they produce; but it does not follow on that account that they are absolutely less severe. They may occupy as large an extent of surface, give rise to a secretion as purulent and as abundant; be just as contagious, last as long and generally longer than the first, which was only attended with more pain. Here, as we see, habit has no influence on the action of the cause which acts as energetically the second as the first time in most cases; but the repetition of the inflammation in the same part, tending from that very repetition, primarily or secondarily to a chronic form, deadens the sensibility and diminishes or annuls the pain, which is not a necessary symptom of every inflammation.

All observers have established a state of habit, or a kind of *acclimation*, (if I may be allowed the word,) but we must beware of regarding habit in the absolute sense that Hunter gives it; or of explaining by its means all the observations which he reports in its favour.

There are men who contract runnings every time that they have connexion with women during their menses, whilst others catch nothing. Leucorrhœa gives a running to some and not to others. The same woman, affected with uterine catarrh, often causes runnings at greater or less intervals in a man who habitually cohabits with her: in this way I have seen many *liaisons* broken and many connexions given up, the parties believing that they could not get along together. In some more fortunate cases the man, becoming less susceptible, ceased to catch anything, although the woman continued in the same state; but then, as Hunter says, if any interval occurred in their sexual connexions, when they were afterwards renewed, the disease reappeared; as it might do also if the woman had new lovers.

In all these cases, if frequent exposure to the same irritation, *always equally severe*, may render a man less susceptible, we must yet take into consideration other circumstances which may happen. Thus, in marriage, or *in a long connexion* with the same woman, sexual in-

tercourse is less frequent and less passionate, and the organs are less disposed to irritation. Women, warned of the state in which they may be caught, and which they do not like to acknowledge, are more careful and often take precautions at their toilette, which are not always observed in new and often unexpected connexions, in which a greater orgasm and especially hasty repetitions of the act dispose the parts to inflammation. I have seen women with leucorrhœa, who, after communicating a clap to their lover, under the influence of a new excitement, gave the same to their husbands, who had seen them with impunity up to that time. However, if it is possible that a person may become accustomed in a certain degree to the causes which give rise to gonorrhœal discharges, and which women escape perhaps more frequently than men; it may be asserted that there is no immunity against the contagion of chancre unless it is a perfect integrity of the tissues.

"*Of the Discharge.*"

P. Ricord. If we take the seat of the pain in gonorrhœa as an absolute measure of the extent of the disease, we may often be deceived. All parts of the urethra are not equally sensitive. The difference which exists in this respect between the gland and fossa navicularis, and the rest of the canal, is well known. This difference is observed not only in the absolute sensibility of the part, but also in its sympathetic sensations; hence M. Jourdan has called the fossa navicularis the *rendezvous* of urethral sympathy. When, however, the disease has progressed in extent and depth, the pain which is generally felt in all the inflamed parts during micturition, is increased in most cases by external pressure or by contact with a foreign body, such as a sound, &c.

As to the amount of suppuration, it is certainly in proportion to the greater or less intensity of the inflammation, and especially to the extent of the disease; and though neighbouring parts not yet affected may yield pure mucus, which mingles with the discharge, they furnish purulent matter only when they have become involved in the disease.

It would not be right to infer, as Hunter did, that in many cases gonorrhœal matter does not come from the bulb, or from parts posterior to it, because it is not thrown out in an ejaculatory manner.

It is easily shown, in many patients, that the gonorrhœal discharge is furnished by the posterior part of the canal; and that although it generally accumulates in the enlarged part of the canal at the fossa navicularis, especially during the upright position, yet by external pressure from behind forwards in the course of the canal, it may be derived from the perineal region. The same thing takes place here as in those cases in which the canal has in a measure lost its elasticity, and the urine continues to drop for some time after the stream has stopped, or compels the patient to evacuate the urethra by repeated pressure along its whole accessible extent.

Gonorrhœa commences in that point which was subjected to the exciting cause, and may extend gradually to the follicles, the cellular tissue, or to those parts which are continuous or adjacent.

"Of the Swelled Testicle."

P. Ricord. The importance which the Academy of Medicine has attached to the question of the affection of the testicles after gonorrhœa, and the debate which followed the memoir that I read on this subject before that learned society, induce me to detail in a concise manner what any observer free from prejudice may learn from every day's experience.

It seldom happens that the disease involves the scrotal organs during the first fortnight of a urethral blenorrhagia.

Balanitis, and with stronger reason, other discharges foreign to the canal, have no influence on the production of this affection. It most commonly appears during the third, fourth, fifth or sixth week, from the commencement of a discharge, or even later. When it occurs at a later period, we generally find that the old running, which preceded it, has been lately revived.

It is almost always when the discharge has involved the posterior parts of the urethra that this affection takes place.

The statistics which I have had drawn up prove, contrary to the ideas generally professed by those who think that the disease is driven from the urethra into the testicles, that it is undoubtedly most frequent in patients who have had no treatment at all.

Fatigue, constipation, chastity, untimely sexual intercourse, external violence, and especially the want of using a good suspensory bandage, predispose to this affection much more than the use of injections, which are often accused wrongfully, unless they have been made too irritating and contrary to all the rules of art. Sudden changes of temperature, especially passing from heat to cold, have a great influence, and sometimes produce true epidemics of affections of this nature.

The left side appears to be most frequently attacked. This difference in frequency of the two sides appears to correspond to the position that patients give to their scrotum, relatively to the seam of their pantaloons; those who "dress" on the left side, and they are the most numerous, have the affection on that side and *vice versa*; so that it is that organ which is not supported by the pantaloons that is the most easily affected. But exceptions to this rule are not rare, and are explained by the action of other predisposing causes which may sometimes preponderate.

The disease extends from the urethra to the organs which secrete the semen, in two distinct ways; either by sympathy and without appreciable alteration of tissue between the urethra and the affected part of the testicle; or—and this process is the most common—gradually by extension of the inflammation, attended with swelling of the tissues, which it involves.

There is no gonorrhœal affection of the scrotal organs without swelling of the epididymis. The epididymis is the first part in which the disease appears; it is also the last to get well, or it may continue permanently engorged. In case of inflammation by direct propagation, the vas deferens may be involved at the same time, but never alone.

This regularity in the commencement of the affection, which is often confined to the *epididymis during its* whole duration, and which in

every case terminates in it, should, correctly speaking, give it the name of blenorrhagic epididymitis.

It is more common to see one side alone affected than the two together or consecutively. When the inflammation passes suddenly from one side to the other it is generally sympathetic, and when the opposite epididymis is seized it is not uncommon for the first to return suddenly to its normal state. In primary double epididymitis the cords are almost always engorged.

In its simplest form this affection is confined, as I have said, to the epididymis alone, or to the vasa deferentia in addition; but if it is at all severe, and constitutional and other causes favour its progress, it extends and becomes complicated. The most common complication is undoubtedly effusion into the tunica vaginalis or hydrocele. This effusion, which M. Rochoux believed to be the principal affection, is sometimes due to a transparent serous exhalation, of a pale yellow colour, as in passive dropsy, or in dropsy caused by obstruction of the circulation; sometimes on the contrary—and these are the rarer cases—it is the consequence of a true inflammation of the serous membrane, and presents all the shades of colour of pus, false membranes and diluted blood, which are generally met with in serous inflammations. These differences, which may be distinguished by the greater or less transparency of the effused fluid, are placed beyond a doubt in those cases in which the fluid is evacuated by puncture.

The effusion into the tunica vaginalis generally takes place suddenly, and often disappears in the same manner. Sometimes, however, it is produced gradually, and lasts as long as the swelling of the epididymis. It constitutes then one of the forms of chronic hydrocele.

The most common complication, next to the one just mentioned, is the engorgement of the cellular tissue beneath the scrotum and around the cord. The skin is in that case no longer moveable upon the subjacent parts; the vas deferens is lost in a solid cord, whose elements cannot be distinguished, and which is sometimes so large as to be strangulated by the tissues that it traverses. These engorgements, which under some circumstances are only œdematous, are sometimes decidedly inflammatory, and may terminate in suppuration and abscess. And finally the skin may partake of the affection through œdema or an erysipelatous state.

The body of the testicle itself is certainly one of the parts most rarely involved. And yet it has been thought, and some persons think yet, that this is the principal seat of the affection, as the name of orchitis or syphilitic testicle, which many pathologists still retain, indicates. In most cases any one may convince himself of the contrary and of the truth of my opinion, by examining with care the affection in its different stages.

At first there is felt only an engorged spot, of greater or less extent, and more or less painful, situated beneath and behind the body of the testicle and very easily recognized. When the disease progresses, as we have above described, and effusion takes place, fluctuation, more or less marked, is soon detected. This is due to the liquid contained in the tunica vaginalis, and is situated in the great majority of cases at the anterior part of the scrotum on the affected side, where there is *frequently found,* as I have pointed out, a transparency in a part of

the tumour which leaves no father doubt as to its nature. The signs furnished by an effused fluid can be mistaken for those of an inflamed testicle, only in case an excessive distension of the tunica vaginalis prevents displacement of the fluid and its *ballottement* on percussion, and changes the sensation of fluctuation into that elastic feel which the sound testicle presents. But in that case superficial pressure of this part of the tumour determines an entirely different pain from that which the testicle on the opposite side experiences when examined in the same way. Moreover, the tumour of the affected side is divided in these cases into two halves; the one, hard, situated behind; the other fluctuating or elastic, and occupying the anterior part. Again, comparing the diseased with the well side, we find that the softer half in front is of the same size as the opposite testicle or larger. In the latter case, which is due to the effusion, if we draw off the fluid with a canula we find the body of the testicle set into the epididymis; its form, position and consistence precisely similar to the well organ on the opposite side. Moreover, by puncturing in these cases of epididymitis complicated with hydrocele, we may convince ourselves that although a large part of the tumour may be due to the effusion, the remainder constituting no inconsiderable portion of it, consists of the epididymis and surrounding cellular tissue. Whenever the testicle is swollen by inflammation, and there is true orchitis, the pain is intolerable, in consequence of the constriction exercised by the tunica albuginea. But the constant pathognomonic sign that may be verified on the dead and living subject, is the rapid induration, either general or partial, which at once deprives the organ of that elasticity, which I may almost assert is peculiar to itself. In these cases, which are of all the most rare, if we evacuate a coexisting hydrocele, we find only a hard mass left, whose elements are more or less indefinitely blended.

Authors are not agreed as to what takes place with regard to the urethral discharge in the mean time. As a general rule, epididymitis never follows a sudden suppression of the running. It does not supervene, to be sure, during the acute and copious stage of a discharge; but the running generally does not diminish in quantity until the epididymitis has set in and made some progress, and it rarely dries up completely unless the epididymitis took place at a time when the clap was decidedly on the decline. The persistence of the running, during the epididymitis, constitutes even an important diagnostic sign. In the passage of the inflammation from the urethra to the epididymis, the symptoms are those of revulsion rather than metastasis.

The secretion of the semen is increased, diminished, or suppressed; sexual desire heightened or extinguished. The semen which is discharged in nocturnal pollutions or sexual intercourse generally preserves its normal character. Yet I have seen it in some rare cases combined with pus, and the mixture of the two did not appear to have taken place in the urethra; in other cases it is accompanied with blood; especially in a state of intimate combination, when, contrary to the general rule, the body of the testicle is involved.

Epididymitis being a local disease, and usually acute in its progress, may excite a general febrile reaction, sympathetic pains in the loins, and symptoms analogous to those of strangulated hernia, such as hiccough, vomiting, *and in rare cases* peritonitis.

tissue known to be very susceptible to inflammation. The structure of the mucous lining of the neck of the uterus differs very materially from that of the rest of the membrane, lining the cavity of the body. It contains an infinite number of glands and follicles, highly organized, and on the alert to resent irritation and take on inflammatory action. If the whole organ, then, by reason of this periodical condition of congestion, be admitted to be predisposed to inflammation, it must be conceded that the cervix and its cavity are peculiarly so predisposed.

If in the unmarried female we admit a strong predisposition to inflammation of the uterine neck, the result of a physiological function, we must necessarily find in the married the presence of powerful exciting causes, and the combination of the two affords matter for wonder, perhaps, that any escape pathological changes in the cervix and its cavity. The process of parturition necessarily exposes the neck of the uterus to severe trials. It is not only stretched out of all resemblance to its unimpregnated condition, but it is often lacerated and contused, and remains, unsuspected, in this wounded condition. Can a lacerated wound heal without the occurrence of inflammation? Certainly not; there must be suppuration and granulation; and how often in other parts of the body do we find ulceration?

In the hands of an inexperienced or awkward accoucheur, too, to what manifold injury is the dilating cervix exposed, by his rude, uneducated and inquisitive handling, or by the bungling use of obstetrical instruments?

In cases of retained placenta, how almost inevitable would seem to be the danger of inflammation?

In cases of abortion, too, when it is not uncommon to find the os tincæ remaining for weeks widely open and its labia thickened and everted, whilst a constant sanguineous discharge marks the persistence of congestion.

In the non-pregnant married female too, we find an all powerful exciting cause of inflammation in the act of coition. The cervix is contused and thrust aside, and especially so when disproportion exists between the parties. Again, women are proverbially prone to constipation, and the cervix can scarcely escape the irritation and often painful pressure produced by the presence of impacted fœces in the rectum. In introducing the fingers into the vagina I have often felt, through the recto vaginal septum, hardened masses of fœces that one might readily mistake for enlarged and indurated glands, or abnormal growths in the rectum, which could not fail to exert painful pressure on the cervix and which required in some cases to be extracted painfully, *one by one*, with the fingers.

Women, too, from the nature of their associations and the force of circumstances, are obliged to pass many hours sometimes without voiding the contents of the bladder, and in this condition it must necessarily trespass upon the space proper for the uterine cervix.

The predisposition, then, of the cervix uteri to inflammation is very great, and the exciting causes numerous and powerful. It is not my intention to touch upon the vexed question of whether *ulceration*, as a consequence of inflammation, does or does not frequently occur in the cervix and os tincæ. I am sure that a condition more nearly resembling ulceration than any other morbid process does occur in very many cases, but am satisfied to know that it is a changed condition of structure, causing symptoms which are relieved by its removal, and am careless whether it be *called* ulceration, erosion, abrasion, or a granular condition of the mucous covering of the cervix and mucous lining of its labia and cavity.

Dysmenorrhœa is known to be a very common affection, and its symptoms varying very much in intensity, need no description by me. Believing in the frequency of inflammation of the uterine cervix and its cavity, I cannot choose but believe the cause of dysmenorrhœa is explained by its occurrence. The process of menstruation is rendered more painful by its existence, the secretion is retarded by it, and the escape of it into the vagina is obstructed. Remedies directed to removal of the inflammation should therefore remove the symptoms of dysmenorrhœa; and my own experience proves to me that such is the fact.

Amenorrhœa may be and doubtless is often caused in other ways, but that inflammation may be and is very often its cause I cannot doubt; for I can readily perceive how complete occlusion of the cavity of the cervix may result from inflammation and adhesion of opposing surfaces.

Menorrhagia is a very natural result of high inflammation of the cavity of the uterine neck. Whilst believing the diminished and retarded secretion in dysmenorrhœa to be dependent on perverted vascular action, I can see in the breaking down and softening of vascular walls, under inflammation, a ready solution of the phenomenon of menorrhagia. Nor is ample experience wanting here to prove the efficacy of treatment directed to the *cause* itself.

Leucorrhœa is doubtless sometimes the result of vaginitis, in whatever way induced, and when thus caused is removable by removing the vaginitis. But it is much more often the result of inflammation of the mucous covering of the cervix uteri and of its mucous lining. Dr. Tyler Smith has *published his belief* that it is principally caused by

inflammation of the mucous follicles which crowd the cavity of the cervix, and indeed accounts for the frequent inflammation of the mucous covering of the cervix by the action upon it of this abundant *alkaline*, uterine secretion; the cervix being accustomed naturally to the acid secretions of the vagina. Here, too, successful treatment of the presumed cause proves the correctness of the belief in its origin. What practitioner of experience has not often seen the inefficiency of stimulating, astringent, soothing, tonic, or cooling vaginal injections, in the treatment of leucorrhœa, and the equal inefficiency of every form of constitutional remedy.

Prolapsus uteri, so often the effect of parturition, in consequence of the increased weight of the uterus, would in all probability not remain permanent but for the occurrence of inflammatory engorgement. The uterus resuming its natural weight, or nearly so, would rise to its natural position, the resiliency of the vaginal walls being restored by removal of the increased weight; but let the neck of the uterus be the seat of supervening inflammatory engorgement, and much increased in size and weight, and it will be found that it cannot return to its natural position by reason thereof, and so it remains in a condition of descent or prolapsus.

I will not stop to enquire if any treatment short of that which attacks and removes the cause of prolapsus can be relied upon by the profession; for who does not know the deplorable inefficiency of all supporters, internal and external, in this distressing symptom of inflammation, and the utter despair with which the practitioner lays aside pessary after pessary, having found his sanguine anticipations of success in their use successively destroyed.

But it is not more than should have been expected. The pessary adds to the inflammatory engorgement, and though it may elevate the position of the organ for a time, it must render its ultimate descent more certain and delay the return to a condition of a health and of consequent natural elevation.

That retroversion and retroflexion, anteversion and anteflexion are traceable to the same cause—inflammation commencing in the cervix uteri—I think there can be no doubt. As well too may we account for the development of fibrous tumours of the uterus, and of ovarian disease, and it is more than probable that many cases of hopeless carcinoma have had their origin in a neglected or misapprehended inflammation of the cervix.

Whilst the opinions thus expressed, and conscientiously entertained, are the result of personal observation, and therefore to me invaluable *and unchangeable*, I well know how utterly at variance they are with

those of practitioners of the highest intelligence and most extended fields of observation, and I cannot refrain from here recording my astonishment that so it should be. Is it not strange and lamentable too that such men as Ashwell and Robert Lee, and Bennett and Montgomery, and Evory Kennedy, and Churchill, and Locock and Tyler Smith, each having access to and command of public institutions, and being engaged largely in private practice, should differ among themselves so vitally as they do on this subject? The importance of the subject of their differences justifies and demands the most patient and earnest efforts to reconcile conflicting opinions, and I believe the most effectual mode of accomplishing this is for every practitioner who is in the habit of treating such affections to preserve with the utmost care notes of his cases, with a view to record them so that they may in time accumulate into a mass of facts, carrying with them certainty and conviction. How can we account for the discrepancy between Dr. Ashwell's statement, that in a thousand cases of uterine disease he found but twenty-five of inflammation of the uterine neck, and Dr. Bennett's statement, that in three hundred cases of uterine disease treated by him, more than two hundred and fifty gave evidence of inflammation of the neck, except by supposing a gross want of accuracy either in the examination or recording of their cases? Here we have two distinguished practitioners, equal in all respects, both enjoying the respect and consideration of the profession and the public, recording their experience as differing beyond calculation. I repeat that this astounding discrepancy must be owing to inaccurate and careless examination or recording of their cases, and that the question can only be settled by the careful and recorded experience of honest practitioners.

As a natural consequence of the difference of opinion as to the frequency or infrequency of uterine inflammation, we are prepared for difference of opinion as to the adoption or rejection of certain physical modes of exploration in uterine diseases. The profession is thus divided into two classes, the one maintaining that every facility should be had for the most complete and satisfactory examination of the organ, and the other denying the necessity for physical examination, and condemning, often with the bitterest reproaches and denunciations, the conduct of those practitioners who resort to such means of diagnosis.

The serious mischief which this division of opinion is daily producing must be evident, but until the profession agrees upon the true pathology of uterine affections, it is as manifest that the evil must continue. As long as one practitioner continues to treat dysmenorrhœa by *attacking an inflamed* cervix uteri, and another continues to

refuse his assent to that pathological state, and rejects the use of means which might lead to his conversion, so long will the public mind be harrassed by two opinions also; and so long will honest and conscientious medical men, on both sides, continue to suffer in reputation and in fortune; for nothing is more certain than the fact that one physician loses the confidence of a family by resisting the wishes of his patient to be relieved in the same manner and by the same means which have relieved her friends from similar disease; whilst another is made to suffer by insinuations and whisperings that he unscrupulously wounds the delicacy of his patient, and resorts to painful and unnecessary investigations into matters which should be preserved sacredly private.

Let the point of dispute be once disposed of, and this can only be done by the collected facts of men recognised as honourable and scientific physicians, and the excited public will soon be soothed by our harmonious action, whilst we, in turn, shall escape the infliction of unjust censure and of scandalous accusations of immorality and impurity.

The physical means of diagnosticating uterine disease, are, it is well known, the Touch and the use of the speculum, both of them, it is conceded, naturally most repugnant to the patient, and I believe and maintain equally so to the pure and honourable physician.

It is not my province to describe the various modes of application of these aids to diagnosis, nor to suggest particular proceedings calculated to lessen the suffering and the shock to the delicacy of the patient, or the embarrassment of the practitioner. Nor will I do more than glance at the well known truth that the practice of obstetrics and of operative surgery compel the employment of means similar to, but often much more compromising of delicacy, than are the physical explorations of uterine disorder, because I have no argument of this nature to sustain, and the use of the speculum could never seem justifiable to my mind, because the patient is less exposed than she is in the treatment of vesico vaginal fistula, or in the operation of evisceration of the fœtus.

I advocate the use of physical means of diagnosis only because I believe them necessary, and even indispensable, in the detection and cure of disease, and I think I have collected facts which will prove this to be true. If my cases should carry this conviction into the minds of those who may honour me by reading them, some good may be effected; if otherwise, then, perhaps, others may suggest means of relief which experience will prove more valuable, and thus good will *be effected.* In any event, the truth and it alone is my object.

Case I. *Inflammation and ulceration of cervix uteri.*—Miss ———, ætat. 30, consulted me on 18th January 1849. Four years previously whilst in good health, living in the country, she was thrown from a carriage and very much frightened, though not seriously hurt, during her catamenial period. The secretion was arrested, and though every effort was made to reinduce it, it did not return. She felt no inconvenience from her fall after a few days, except a dull pain in the hypogastric region, until the approach of her next menstrual period, at which time she suffered intensely, and was obliged to remain in bed during the whole period, resorting to the usual remedies for relief. During her whole previous menstrual life she had never been obliged to lie by for an hour, and in fact I presume suffered at those times much less than the majority of women in health.

From this time her general health began to fail; each succeeding menstrual period was expected with dread and dismay, and never failed to verify the expectations. She became low spirited and nervous, a constant aching pain in the sacral region existed, and leucorrhœa was established. Her appetite was fickle and impaired, and a condition of constipation occurred, which required almost daily laxatives or enemata. She became very thin and so feeble that she could not walk more than fifty yards without stopping to rest. Riding in a carriage produced an increase of the sacral pains, and greatly fatigued her also. In short her friends considered her condition hopeless. During these four years of suffering she had undergone a variety of treatment, and various diagnoses had been made of her disease; at one time her spine was pronounced diseased, and was treated accordingly, at another her case was termed hysteria, and finally her physician expressed his fears that she had phthisis.

When Miss ——— was first seen by me she was very much emaciated, and so sad and depressed that I had great difficulty in getting answers to my questions. Her pulse was quick and feeble, her skin dry, her tongue very red and dry. She had constant headache, and constant backache, utter want of appetite, slight cough and very great debility.

Her catamenia had ceased four days previously, having occasioned the usual suffering, and profuse leucorrhœa existed. Whilst I had no doubt of the cause of Miss ———'s condition, yet as her friends were impressed with the belief of the existence of tubercular disease, I made a very careful exploration of her chest, and discovered nothing inconsistent with a healthy condition of the organs there. With equal care I examined her spine, but could detect no evidence of spinal disease.

I then informed a female relative of Miss ——— of my opinion of the nature of her disease, and expressed the belief that appropriate treatment would be followed by relief. I requested permission to examine the uterine neck by the Touch; and intimated that it would be necessary afterwards to employ the speculum. The patient was informed of my opinion and wishes, but refused positively to submit to any examination of that nature. I had, however, succeeded in impressing her relative with the truth of my views, and by her persuasion Miss ——— was at last induced to submit to an examination by the Touch. *This examination* convinced me that a highly diseased

condition of the cervix was present. I found it low down in the vagina, directed backwards; presenting a hard, irregular surface, much larger than a healthy cervix, hot to the touch, and with the os tincæ widely enough open to admit the end of the little finger. The finger was covered with a thick yellowish matter on removing it from contact with the cervix. I was perfectly satisfied by this examination that the cause of Miss ———'s ill health was in the diseased condition of the cervix uteri, and could have dispensed with the use of the speculum so far as the diagnosis was concerned. But I felt sure that I should require its use in the treatment of the case, and therefore thought proper to verify my diagnosis by its use at once. My suggestion was received indignantly by the patient, and, like the suggestion of the previous examination, refused; but believing that my duty required me to insist on its employment, I was very firm in so doing, and ultimately obtained her consent; but not until my patience was nearly exhausted.

The speculum used on 22d January revealed a very large cervix covered with yellow secretion; this being wiped away, the os tincæ was seen in the form of a ragged fissure, with its labia everted, and the mucous lining of the cavity of the neck thickened and very red. An ulceration or granular condition of the mucous covering of the neck irregularly surrounded the os tincæ to the extent of nearly half an inch. It was not sensibly excavated, and terminated in the engorged mucous coat of the rest of the cervix by an abrupt line. The os tincæ was partly filled by a viscid gelatinous looking mass, which was detached with some difficulty by means of a small sponge. The examination gave great pain, but although the vagina was extremely sensitive, there appeared to be no inflammation of its mucous coat.

By these examinations was thus disclosed a highly diseased condition of an organ, whose supply of sympathetic nerves connected its pathological state with impaired function of almost every organ of her system, and this general disease starting, as it manifestly did, from this important centre, was threatening her speedy destruction.

The treatment upon which I placed Miss ——— was as follows: Rest in the horizontal posture with the pelvis elevated, a hip bath morning and evening of the temperature of 80°, in which she was directed to sit for half an hour; a daily enema of tepid water, and vaginal injections morning and evening of water of the same temperature as that of the bath. These injections were administered while she was in bed with the hips elevated. I directed also the application of fifteen leeches to the neck of the uterus. These were applied on the 23d, and occasioned great pain during their application.

As Miss ——— complained of thirst and very dry mouth, I directed ice in small pieces to be held in the mouth, and prescribed a table spoonful of cream several times during the day as diet. This was very grateful to her stomach, and she eagerly asked for an increase of the allowance at my next visit.

I continued to visit Miss ——— every day, and found her with rather less pain in the back since the application of the leeches, and some improvement in appetite and in the condition of her mouth and tongue.

On the 28th January I made another examination and found some

improvement in the condition of the cervix. I now applied the solid nitr. silver to the ulcerated surface and introduced it into the cavity of the neck to the extent of ¾ of an inch. Fifteen leeches were again directed to be applied on 2d February.

On the 4th February her catamenia appeared, and I had an opportunity of witnessing her suffering, which was very acute. Her discharge continued for four days.

On the 13th February I again used the speculum and found the cervix less hard, paler and covered less with muco purulent matter. I could not detect any improvement in the ulceration, although the os tincæ was certainly smaller, and the mucous lining of the cavity of the cervix less thickened and less red. Miss ———'s general condition had improved. She began to ask for more food and to sleep better. I directed her to be again leeched on 15th February, and again applied nit. silver.

On the 18th I again used the speculum, and found the condition of the cervix improved. Nit. silver again applied to ulceration and cavity of cervix.

On the 23d (having visited Miss ——— daily since 18th) I again used the speculum and found still an improvement in the cervix, which had considerably diminished in size, and was much less coated with leucorrhœal matter. The nitrate was again applied as before.

On the 2d March the catamenia again appeared, and I was rejoiced to find during their existence (five days) that her suffering was much less than during the previous "period." She told me that it was less than it had been at any time during four years.

On the 10th March I had the same number of leeches applied, and on the 13th applied the nit. silver as before, finding at this examination a marked improvement in the size of the ulceration and the condition of the os tincæ.

Examinations were made on the 17th and 24th March, and the caustic used each time, but the necessity for its use was on the 24th nearly over, so much improvement had occurred in the size of the cervix, the condition of the os, and in the ulcerated spot, now diminished to a mere speck.

On the 1st April the catamenia appeared, and lasted till the 5th, with very inconsiderable pain.

On the 8th April I examined Miss ——— and found the ulceration gone, the os tincæ almost natural, and the general cervix completely altered from its condition when I first examined it on the 22d January. It was now soft to the touch, certainly diminished in size one half, occupying a much higher position, with no abnormal heat, and of a pale pink colour. I simply touched the anterior of the os tincæ with the pencil of nit. silver. From this date my daily visits ceased. It was only necessary now to restore the shattered health of the patient. I directed, however, the baths and vaginal injections to be continued. There no longer existed a necessity for daily enemata; two or three in the course of a week only being required. The bed was exchanged for a couch, and this soon gave way to the arm chair, and finally after passing through a catamenial period from 2d to 6th May, without very little pain, I allowed her to be brought into the parlor, where she

generally remained during the whole day, sitting or standing, or slowly pacing the room, infinitely delighted with her increasing strength and freedom from pain. During the month of May she rode out several times, and improved in appearance very much.

On the 1st of June the catamenia appeared and lasted till the 5th, and she pronounced herself free of pain during the whole period.

Again on the 1st July they occurred with the same happy relief from suffering.

Miss ——— was now very anxious to return home, and I consented that she should leave Richmond on the 15th July, but was extremely anxious to examine the condition of the neck of the womb before she left, and accordingly she reluctantly consented to submit.

I made the examination on the 10th, and found the os tincæ perfectly natural, round, nor larger than a quill, and with its margins perfectly smooth. The cervix was perfectly healthy, and not the slightest evidence existed of leucorrhœa.

Miss ——— returned home on 15th, having increased in weight more than twenty pounds, and in perfect health. I have repeatedly seen her since then, and never without diligent enquiry as to her condition, and I have the satisfaction of knowing that she has remained free from the slightest return of the old symptoms.

ART. III.—*An inquiry into the mode in which Pus is produced.* By EDWARD WARREN, M. D., of Edenton, North Carolina.

The difference of opinion existing among medical men in regard to the manner in which pus is produced, demonstrates the importance of further pathological research, and justifies the investigation attempted in this paper. This question is so intimately connected with the whole subject of inflammation, as to render an examination of the various phenomena connected with that condition, necessary to its solution.

When an irritant is applied to a living tissue for a sufficient time, an impression is produced on the nerves, which by reflex action stimulates the vascular tissue of the part; a struggle between nature and the morbific influence ensues; the attempt to repair or resist the evil effort is made; the principle burden falls upon the capillaries, and inflammation is developed. The capillaries are at first contracted, and the current through them accelerated; they then expand beyond their original capacity; the blood moves slowly in them, lymph globules are produced, serum is poured out, and liquor sanguinis finally exuded. These consecutive changes are accompanied and indicated by certain *signs, as* redness, heat, pain, swelling, throbbing, increased sensibility,

disorder of function, and change of secretion. Wherever these phenomena exist inflammation is present, producing as its results organization of lymph, suppuration, ulceration and gangrene, and terminating either in resolution or metastasis.

I shall not attempt to discuss the theories or reconcile the differences of opinion as regards the essential nature of this process, but will simply refer to the views of some pathologists whose erudition and ability render them valuable authorities on the subject.

"Inflammation," says Müller, "is a compound of the phenomena of the local injury, a tendency to decomposition, and an increased vital action, striving to balance the destructive tendency." And again the same author observes: "The phenomena of inflammation arise as much from the tendency to decomposition as from a reaction of the tissues to resist it." Williams, in his excellent work on the Principles of Medicine, says: "It is the approximation of two such opposite conditions, excitement and the interruption of the living actions, that renders inflammation so destructive to structure as well as function." Miller, the author of one of the most philosophical and practical works on surgery extant, in treating of this subject, says: "At first there is excitement, or increased normal function, then perversion, and ultimately depression or arrest," or in other words, that there is primarily an exaltation of the vital power, and then abatement or destruction of it. Hunter also observes: "Though pure inflammation is rather an effort of nature than a disease, yet it always implies disease, or disturbance, inasmuch as there must be a previous morbid or disturbed state, to make such effort necessary." Wharton Jones explains the phenomenon similarly. According to him, the exciting cause acts "primarily on the sensitive nerves, exalting their activity. The motor nerves which have sympathetic relations with the excited sensitive nerves, are secondarily affected. But this affection of the motor nerves of the vessels is not a corresponding one of excitement, but an opposite one of depression, of suspension of action, of paralysis." But it is useless to multiply authorities, as the prominent ideas thus expressed, are entertained, and approved of by the most accurate observers, and best pathologists in the profession. Inflammation, as before stated, terminates in resolution or goes on beyond this point to the suppurative stage, wherein pus is developed, and from which ulceration and gangrene may result. If the liquor sanguinis, which has escaped from the vessels, is absorbed or organized, the inflammatory acmé is not attained, and there is no pus produced; but if the violence of the inflammation prevents the proper exercise of the formative power of the tissue, and no organization *takes place, suppuration* follows as a necessary conse-

quence, and a sure indication of the fact. From the opinions quoted, and facts adduced, the following inferences are deducible.

(1). There are two antagonistic influences called into operation by the inflammatory process; one striving to produce structural disorganization, debility, or death in the part; the other resisting this disturbing tendency, and attempting to preserve the tissue in its normal condition. On the issue of this struggle, the continuance, or cessation of the inflammation depends, and by it the nature of the product is determined. It is evident, that the various solid tissues derive their pabulum from the blood, especially from its fibrin, "which they have the power, by their vital endowments, of causing to assume their own respective forms of organization." An increase or diminution of this "formative power," must depend then on the amount of vitality in the tissues; and as the existence of an effect necessarily implies the operation of a cause, there can be no interruption of the function of nutrition without the action of some principle, the tendency of which is to diminish the vitality of the part. Now, as a diminution of the "formative power" of the tissues is an essential, because a constant characteristic of a certain stage of the inflammatory state, it follows as a necessary consequence, that a morbific influence antagonistic to the vital principle is present in it also. Hence the idea of a struggle between two opposing agents, which has connected itself with this process, and the association in it, of the opposite conditions described by pathologists.

(2). The termination of the struggle described, is indicated by certain phenomena, differing from each other essentially, and sufficiently characteristic to determine the nature of the result. Organization of the effused lymph, and suppuration, may be assumed as exponents of the two opposite classes into which these phenomena arrange themselves. As these "results," are as dissimilar as life and death, they lead directly to the supposition, that different agents have operated in their production. But it has been shown before, that inflammation is a condition, in which there is a struggle between two antagonistic principles, and the existence of organization and suppuration, is explained by making them the distinct effects of these opposite causes. When there is no abatement of the vitality of a part, the formative power remains unchanged, and the fibrin supplied by the blood is appropriated. And as it is manifest, that organization is in itself a vital act, it is impossible to consider it a product of the morbific influence with which the part is impressed. Now, although but a small amount of vital force may be necessary for the simple act of organization, still it indicates the operation of that principle, and its appearance as a product

of inflammatory action shows that "the struggle" has resulted adversely to the morbific agent. When organization presents itself then, it follows that the vital principle has triumphed and that the disorganizing tendency is abated, at least for the time. By a similar course of reasoning, as well as from this exclusive argument, it may be demonstrated, that suppuration connects itself with the morbific agent, and is the effect of that cause, which opposes itself to the natural state of the part. Its presence then, is an evidence of a diminution of vitality, and shows that the destructive tendency is superior to its antagonist. Pus then, is produced when the formative power has ceased, and the opposite condition, a disposition to disintegration, from diminution of vitality, has become established. There are some facts which particularly sustain this view of the subject.

Inflammations, which occur in those of robust, and healthy constitutions, whose tissues contain their full measure of vitality, are shorter in duration, and have a greater tendency to plastic deposits. Whilst on the other hand, whenever previous disease, vicious habits, or other debilitating causes have weakened the vital powers of the system, its ability to resist the destructive influences of the process, is impaired, and pus is readily and rapidly produced.

Again, according to Williams, there are three circumstances which determine suppuration as a product of inflammation.

(1). A certain intensity (obstruction and determination in the vessels) and duration of the inflammation. It is evident, that intensity and duration are necessarily abnormal, and cannot be produced by that gives and secures health to the structure. The activity and continuance of this process indicate the existence then, of a cause at variance with the vital endowment upon which the formative power of the part depends, and this cause is an essential condition to the production of pus.

(2). The access of air to a wound distinctly promotes the formation of this fluid. Air can only exert a chemical influence on the exudation corpuscles, and whatever results are produced by its presence, clearly belong to the action of that influence. Hence it follows, that the formation of pus is not necessarily and invariably a vital act, but may also be the effect of other causes.

(3). A peculiar condition of the blood is also instrumental in promoting suppuration. As to the essential nature of this condition, and the particular changes in the fluid under these circumstances, nothing is definitely known, but some impoverishment may be inferred from the fact, that this peculiarity is usually found associated with a cachetic, *ill nourished, debilitated state* of the system. The wounds of those

persons whose blood has thus been deteriorated, do not heal by simple plastic adhesion, and inflammatory action seldom terminates without the appearance of pus. From this, it is apparent that the principle hitherto deduced fully explains the manner in which suppuration is promoted by abnormal states of the blood, since they occur not as evi dences of healthy action, but associated with those influences, which oppose themselves to the vital principle.

In defining organization and suppuration to be distinct and dissimilar products, I do not mean to say that the antagonism between them is such as to render their simultaneous occurrence impossible. They certainly present themselves not unfrequently as concomitant phenomena, and in fact furnish an explanation of the complex process from which they result. Though the vital endowment of the tissues may be insufficient for the proper performance of the formative function, it is still active enough to produce low organisms up to a certain point of diseased action. Paget observes that: "It may be but a vague estimate of the amount of vital force exercised in any act of formation; yet we may be sure that a comparatively small amount is sufficient for the production of low organisms, such as the fibrinous and corpuscular lymphs of imflammation." The presence of these inferior grades of organization show that though the vital power is not entirely destroyed, it is diminished, and the development of pus in connexion with them is an evidence that the whole exudation has not been impressed with vitality, but that a portion, having been operated on by an agent antagonistic to the vital principle, has yielded itself up to other influences, and broken down into purulent matter.

A high grade of organization indicates the existence of a proper degree of vitality, and the production of lower grades is an evidence of a diminution of vital power. If then the amount of vitality can be thus measured, what is the natural conclusion, when there is no organization at all? Evidently that there can be no vital power to produce it. Organization and suppuration are the opposites of each other, and the deduction is inevitable, that the formation of pus is not a vital act.

Pus is a whitish yellow, or greenish opaque liquid, somewhat thicker than cream, and of a sweetish taste. Under the microscope it appears to consist of small, round, and occasionally oval corpuscles, floating in a transparent albuminous liquid. "These globules are obviously a modification of the exudation corpuscles; each consists of a fluid with granules and molicules contained within a thin cell, which sometimes has granules also on its surface."—(Williams.)

"The serum is analogous to that of the liquor sanguinis, the globules *and malicules to its fibrin*; indeed there is every reason to believe that

the globules are actually fibrin in a degenerated form."—(Miller.) According to Mandt, the larger pus globules, as regards size, form and appearance and their relation to chemical agents, exhibit an entire agreement with the globules which fibrin presents either in the inflammatory buff, in false membranes, or in the fibrils which it forms when the blood is shaken with albumen. When recently formed, pus contains a larger amount fibrin than when it has grown older, and in proportion to its degeneration displays a greater departure from the material of which it was originally composed, or in other words, the quantity of fibrin destroyed, bears a direct ratio to the duration of the suppurative stage; and there is no difficulty in believing, that pus is produced by the destruction of the exuded lymph. The large globules exceed in size the exudation corpuscles and the blood discs, measuring from $\frac{1}{2000}$ to $\frac{1}{1500}$ of an inch, which fact precludes the possibility of their being separated from, or absorbed into the blood in their natural condition. This fluid may be formed either upon exposed inflamed surfaces, unexposed membranes, and granulations, in sacs, and in the substance of organs, (in which respect so important a difference between pus and all secretions is manifested, that it will be particularly considered in another part of this essay.) In a word, pus is evidently produced by the breaking up of the exuded lymph, contains corpuscles, fibrinous in their origin, larger than the capillaries themselves, and possesses certain other properties which distinguish it from the products of secretory action.

(2). Having reviewed at length the circumstances attending the development of pus, and investigated the nature of that peculiar fluid, I shall now institute some inquiries respecting the laws by which secreting functions are governed, in order to determine their relations to the suppurative process. By secretion is meant the separation from the blood of certain materials which either act as poisons to it, or are required for the purpose of digestion, assimilation and nutrition. Its essential character differs but little from that of nutrition, as each consists of a process of cell growth. But whilst the cells in nutrition take from the blood certain materials, to deposit them in the various tissues, "the cells for secretion separate matters which are designed either to be thrown out of the system altogether, or to subserve some future use in the economy."

Whatever opposes itself to either nutrition or secretion is antagonistic to both, and the conditions essential to proper secretory action, can never be found in these circumstances, and conditions, by which the formative function is interrupted. But the formation of pus is effected in *all its purity and perfection,* when the formative function is

suspended, and proper secretory action is impossible. Hence, it is reasonable to believe that pus is not a secretion. Again, if this fluid is a secretion, it must be either excrementitious or recrementitious, and subject to the laws by which these two divisions are governed.

If pus belongs to the excrementitious class, and is formed for the purpose of eliminating some noxious principle from the blood, its constant production becomes necessary also, for the elements of the excretions are continuously elaborated; as it is only developed under peculiar circumstances, it is excluded from this division of secretions. It may be urged, that pus appears only in connexion with inflammation, because its object is to separate fibrin from the blood, which element is in excess in that process. If this were true, the quantity of pus produced would always bear a direct proportion to the amount of fibrin in the circulating fluid. Whereas even during inflammatory action the ratio between the two is inconstant, and in pregnancy and rheumatism, although the amount of fibrin is excessive, there is no necessary formation of pus at all. Besides liquor sanguinis is exuded before suppuration begins, and to suppose that it is reabsorbed, and then secreted, in order to relieve the blood of a poisonous element, is an absurdity too apparent to require exposure.

If not excrementitious, is it recrementitious? Recrementitious secretion, is the elaboration of substances "which cannot be simply separated from the blood, since they do not pre-exist there, but which on the contrary are newly formed from the proximate components of that fluid." The final cause of their production, is "to subserve some future use in the economy by assisting in digestion, nutrition and assimilation." Passing by the considerations which arise from the fact, that pus assists in neither of these processes, and the circumstances connected with the development of that fluid, I shall briefly consider another point connected with this class of secretions.

Haller, with some other pathologists, asserts that "all secretions, under the influence of disease, may be formed by each and every secreting organ." Müller denies this doctrine and explains the phenomena upon which it is based in the following manner: "Cases sometimes occur in which the secretion continues to be formed naturally, but not being able to escape on account of some obstruction, is reabsorbed into the blood, and afterwards discharged from it by exudation in other ways; but these are not instances of true vicarious secretion, and must not be so regarded." Now as both of these explanations furnish a strong argument in support of the position assumed in this paper, I shall not enter into a discussion of their merits, but will *admit either as true.*

(1). Then if all secretions may be formed from each and every organ, and pus is a secretion, it follows that it may be produced by any gland in the body, and the elimination of this fluid by the kidney, liver, skin, &c., is rendered possible. Again, if this hypothesis is correct, the cells by which pus is produced are also capable of secreting other fluids, and the presence of urine, bile, milk, &c., in abscesses, would be no unusual thing. But these things are impossible, and hence it follows that pus cannot properly be classed with secretions.

(2). Admitting that this general interchange is not affected, and adapting the explanation of Müller, then when secretions are "not able to escape to the exterior, they are reabsorbed into the blood," &c. If pus is a secretion the law applies to it, and when some obstruction opposed its free discharge, it must be reabsorbed also. Now the reabsorption of this fluid is not only denied by the best authorities but is opposed and prevented by a physical law of the most absolute and unalterable nature. Dr. Baly declares that there is no proof whatever of their absorption. Müller entertains the same opinion, and Williams utterly repudiates the doctrine. And when it is remembered that the globules of pus are larger than the red corpuscles of the blood, and of a greater diameter than the capillaries themselves, the possibility of absorption is utterly precluded. The globules are not only too large to pass through such narrow channels, but if the secretory law now under consideration applied to pus, there would be no abscess formed without the induction of most disastrous consequences to the system. For the production of purulent matter in a cavity would necessarily furnish the conditions requisite for its reabsorption, and the most ordinary inflammation would be attended with all the evils which now distinguish phlebitis. There is another important particular in which the laws of secretory action do not apply to this peculiar fluid. "All the proper secretions," says Carpenter, "are thus either poured out upon the exterior of the body or in cavities which lead to it." If the synovial fluid is a secretion, this law will need amending, and may thus be stated. All secretions are poured out either upon the exterior of the body, upon surfaces which lead to it, or in natural pre-existing cavities. If pus is properly a secretion, it must be produced in one of these localities; but it may be produced "on the surfaces of organs, in their tissues, and in unnatural and temporary sacs."

The subject might be pursued at length, and many additional arguments of the same kind adduced in support of my position. But I will simply content myself with demonstrating that pus is sometimes produced *under circumstances which* render secretory action impossible.

Secretions depend on the vital endowments of cells. If it can be shown that pus makes its appearance where no vital cells can exist, it cannot be with propriety considered a secretion. There are several facts which indicate that it is thus formed. If pus is removed from an inflamed part, and some of the exudation which is there poured out be collected between two transparent plates of glass, globules are seen to form gradually on them until the fluid is converted into pus. If there is primarily secretory action in the production of the exuded fluid, the pus developed from it is evidently the result of a subsequent and entirely different action. Besides as the plates of glass do not contain cells, the process by which pus is formed between them cannot be a vital act, and hence the fluid is not a secretion. The fact upon which this conclusion is drawn is furnished by Autenrieth, and is reaffirmed and subscribed to by Müller and Brugmans.

The doctrine, that pus may be formed directly from the blood, as advocated by Laennec, which of course excludes the idea of its being a secretion, is also maintained by Gendrin, who sustains it by the following interesting experiment: If a portion of an artery or vein be included between two ligatures, a slight degree of inflammation is excited, the blood coagulates, and the clot organizes. But if a stimulating injection be thrown into a vessel, the circulation through which has been suspended by artificial means, and then blood be admitted and retained in it, a more intense degree of inflammation is excited, and the lymph effused, and the clot resulting from coagulation, instead of organizing, breaks down into pus. This experiment completely sustains the position assumed in this dissertation, by showing that suppuration takes place where there is a loss of vitality and where there are no organized cells to secrete it.

Again, this pathologist found, that "if the blood taken from one dog be injected into the cellular texture of the axilla of another, it soon coagulates, and the injected blood is gradually absorbed; but if a higher degree of inflammation is excited by a stimulating injection, the fluid instead of being absorbed is rapidly converted into pus." Or in other words, that the production of pus depends upon that diminution of vitality incident to violent inflammation, and not upon the presence and action of organized cells.

As pus then is formed under circumstances so antagonistic to secretory action as to render that process impossible, the conclusion is legitimate that it is produced in some other way, and cannot be properly regarded as a secretion.

The doctrine of pyogenic membranes is hypothetical only, and is *evidently based* upon a mistaken view of the origin and objects of

those tissues. These membranes are doubtlessly produced by a condensation of the organized fibrin, and serve the purpose of protecting the subjacent structures from contact with purulent matter. Such a membrane is not only rendered compact by this condensation, but is endowed with more vitality than lymph usually possesses, because it is forced into more intimate union with living tissues, and is consequently more highly organized. The obvious fact that pus is frequently without the interposition and agency of a pyogenic membrane, is a conclusive argument against this hypothesis.

I have thus examined at considerable length the circumstances attending the development of pus, and have endeavoured to establish the inconsistency and impropriety of considering it a secretion. I have long entertained these views, but whether I have succeeded in sustaining them, must be left to the decision of those who have honoured this paper with a perusal.

ART. IV.—*Remarks on Typhoid Fever, illustrated by cases, and a Tabular Statement of the Histories of Patients treated at the College Infirmary, Richmond.* By B. ST. GEO. PEACHY, M. D., Resident Physician.

The wards of the Infirmary offer many opportunities for the observation and study of typhoid fever. Numerous cases are here treated, and as it is a disease whose forms and varieties are protean, I have selected a few examples to report in this journal, practically illustrating the necessity for cautious prognosis in every stage. Patients have been received into the wards, and have recovered, whose chances for cure seemed slight indeed; others manifesting but little constitutional disturbance, have suddenly sunk and died. This disease is one at a certain hour, another at a different period, and the symptoms attendant upon each phase are alike deceptive.

Whatever be the primary cause of typhoid fever, whether telluric, solar or lunar, it is not our object here to enquire or discuss. The purpose of this communication is entirely practical, and professes nothing original.

This fever, so insidious in its incipiency, tardy in its cure, and often dire in its results, has been combatted by various modes of treatment; and, assuredly, humanity is liable to few diseases that afford such length of *time for professional* experiment; but the method based up-

on the clearest conception of its proximate cause and medium of invasion should be that pursued; here as elsewhere, a just pathology will lead to rational therapeutics. Does it attack through the nervous or circulatory system? Without specifying the reasons for the conclusion, for they are known to the profession, we may answer that, so far as investigations have yet gone, there is just cause to believe that the morbid element is introduced into the economy through the agency of the circulation. If then it consist of a poison residing in the blood, what plan of treatment is the best to adopt? The organs of the whole system must be all affected in this fever; and hence the poison is to be eliminated or death must ensue. The deaths that have taken place among the patients here treated, were attributable to one of two causes, viz:—utter prostration, responding to no stimulus in whatever form or proportion administered; or melæna consequent upon intestinal ulceration. I shall report one case of cure and one of death, with the lesions revealed at the autopsy, and mention the treatment pursued in each, and furnish a table of the most important cases that have been treated here within the past year.

Case I. *Severe case of typhoid fever; delirium; great prostration; recovery four weeks from the commencement of the attack.* (Under the care of Dr. Tucker.)—Thornton, a negro boy, aged 15, admitted July 14th, 1852. At time of entrance patient was much debilitated and emaciated, exceedingly nervous and slow in giving any response to questions; skin very hot and dry; bowels constipated; pulse quick and feeble; eyes red and watery. He appeared quite deaf; his lips were dry and chapped, and his teeth and gums were crusted with dark sordes; tongue very hard and dry, and appearing as if it had been glazed over. There was some pain upon pressure over the right iliac region complained of, but not so much, I infer, as there would have been, had the cerebral disturbance not existed. The decubitus was characteristic of great prostration, manifested in a constant slipping towards the foot of the bed.

The commemorative history of the case was briefly this: About a week prior to his admission into the ward, patient complained of general *malaise* and increasing indisposition to active exercise, followed on the next day by a chill. Much febrile reaction succeeded, and continued without any marked remission, and considerable diarrhœa supervened, with pain in the right iliac region. The patient was delirious, and attempted to escape from his nurse. While the latter was asleep, he left his bed, and getting out of the window passed the fifth night of his attack in walking about the streets during a heavy rain. He was thus exposed some fourteen hours, and having been arrested was brought here with the symptoms above described. (Blister to the abdomen, stimulating enema.) 8 o'clock same evening. No improvement. No evacuation from bladder or rectum. (Blistered surface *poulticed*. Urine drawn off by catheter. Hydrarg. submur. grs. iiss.; *morph. sulph.* gr. ¼. Repeat enema.) July 15, morning. Patient

had slept none during the night; was very restless; no abatement in any of the symptoms; delirium slightly augmented. (Hydrarg. submur. grs. vi., to be followed in six hours by ol. ricini ℥j., and if necessary another enema.) 4 o'clock, P. M. Patient had passed copious evacuations; fever much diminished; heat and dryness of skin considerably lessened, and general condition greatly improved. (Hydrarg. submur. grs. ij.; pulv. ipec. comp. grs. iij., ter die; arrow root, milk toddy.) This treatment was continued until the 19th, at which time the fever had subsided, the pain in the abdomen was relieved, the skin had become moist and cool, the tongue had cleaned, and the delirium had disappeared. Attention was paid to diet, small doses of sulphate of quinine were administered as a tonic, the bowels were kept regular by gentle aperients, and on August 6th, patient was discharged cured.

Case II. *Mild typhoid fever; haemorrhage from the bowels; death; autopsy.* (Under the care of Dr. Tucker.)—Girl Nancy, aged 18, admitted November 8th, 1852. Patient walked from her residence to the Infirmary, a distance of several squares. Upon being questioned concerning her disease, its mode of attack, &c., she said that she had been sick "a good many days previous; was taken with pain in her back and fever; had had some cough, and considerable diarrhœa, and felt very weak; didn't like to sit up." This was all she knew of her attack. At time of admission here she presented the following symptoms: Pain in right iliac region, diarrhœa, tongue pointed, red along the edges, thickly furred in the centre, not very dry; skin hot and dry, pulse 155 and feeble. (Hydrarg. submur., grs. v.; fomentations to abdomen.) November 9th. Patient complained still of pain upon pressure, skin about same as before, tongue unimproved, had had a nearly healthy evacuation from bowels an hour previous to visit. (Hydrarg. submur. grs. ij.; pulv. ipec. comp. grs. iij.; ter die; pepper poultice to abdomen; neutral mixture; arrow root.) During the day patient improved and expressed herself much better, and felt some appetite for her food. November 9th. The patient's condition is very much improved. (Discontinue mercury. Neutral mixture, with two grains of sulphate of quinine every two hours.) Symptoms of marked improvement were manifested during the day, and the night was spent in quiet undisturbed sleep. November 10th. Patient was sitting up, said she felt nearly well, and hoped to return home on the following day. The quinine alone was continued; under the use of it she seemed to rally rapidly. November 11th. Patient walked about a little in the wards, and though weak, evinced signs of improvement. Diet still the same. No delirium had supervened during the course of fever. The bowels had been quite regular, with a slight tendency to diarrhœa. The discharges were nearly natural both in colour and consistency. The case continued in this way until November 11th, 8 P. M., when I summoned Dr. Tucker to see the patient, on account of a hæmorrhage from the bowels, that had come on very suddenly. To our surprise it was profuse and incontrollable. Every means was resorted to, astringent and stimulant, but with no benefit. Death took place in less than one hour from the time of the first bloody evacuation. It may be proper here to state that this woman's catamenia had been entirely *regular*. The autopsy was made eight hours

after death. The whole mucous membrane of the ileum and of the ileo-colic portions of intestine was much congested and softened. Lower part of ileum studded with ulcers varying from size of a pea to that of quarter of a dollar. Mesenteric glands much enlarged and softened. At the bottom of the ulcers the patent orifices of blood vessels were distinctly seen.

These two cases form the extremes of many others intermediate. The first presented symptoms of the worst and most ominous character; the second, until its last phase, wore no aspect of incurability.

I have extended this article beyond the limits prescribed, and must postpone other cases and a clinical table (accurately made out from the Infirmary books by Mr. D. S. Watson, resident student,) to another time. I have barely room left to express the belief that in eleven cases closely observed and daily recorded, in which only two deaths occurred, the mercury employed was the basis of cure. In no case was it pushed to even approximation to ptyalism. Without it, more cases, in our humble judgment, would have been attended with fatal results. It has been my good fortune to witness here the administration of mercury in various cases, in various forms and proportions. Its use has been moderate and its effects closely watched, lest ptyalism should be produced. Mercury seems to claim as general an action upon the whole glandular system as has been awarded it specially from its apparently specific action upon the liver. Could the various secretions promoted by the judicious use of this medicine be collected and exposed to view in so tangible a form as the hepatic secretion, whose appearance on its exit from the intestinal canal can be closely examined, we believe that the "specific" opinion would be abandoned and a more extended field of action allowed to this medicine. From witnessing its effect in typhoid fever, we conclude that its action is not solely upon the liver, nor sudoriparous glands, nor kidneys, but upon them all together; that its virtue resides in the power we assume it to possess of bringing the entire system from a state in which every secretion is either partially or entirely arrested, to a state fitted for the resumption of secretion, and that it is by the harmony thus produced in the secretory apparatus that the poison is eliminated and health restored.

[CONCLUSION IN NEXT NUMBER.]

PROCEEDINGS OF MEDICAL SOCIETIES.

MEDICAL SOCIETY OF VIRGINIA.

The twenty-ninth annual meeting of this association was convened in the Medical Hall in this city, on April 5th, the President, Dr. BEALE, in the chair, and about forty fellows being present. We regret to record the fact that the attendance of members from the country was very small.

On motion of Dr. ATKINSON, of Danville, the constitution was so amended as to make a quorum consist of twenty fellows instead of forty.

The calling of the roll, and reading of the minutes of the last meeting, were dispensed with, and the regular order of proceedings was suspended. The Committee on Nominations reported the names of twenty-seven candidates for membership, who were unanimously chosen fellows of the Society.

Dr. ATKINSON, of Danville, then offered the following proposition:

"It being deemed of vital importance to the interests of the profession throughout the state, that this Society shall have a journal of its own, and which shall be conducted by a corps of editors, to be elected at each annual meeeting:

Resolved, That a committee of five be appointed by the president, whose duty it shall be to take this subject into consideration, and to report to the present meeting upon its practicability.

Resolved, Should the committee decide that it may be to the interests of the Society to control such an organ, they shall ascertain at what terms the *Stethoscope* can be purchased, and report, in detail, the plan by which, in their judgment, the views set forth in the above preamble may be best carried out."

The majority of the Committee, consisting of Drs. WORTHAM, GIBSON, and SCOTT, subsequently reported that "it was inexpedient to engage in such an enterprise at this time." The minority, consisting of Drs. ATKINSON and RODDEY, reported favourably to the scheme; and, on motion of Dr. ATKINSON, the report of the minority was accepted, and a committee consisting of Drs. ATKINSON, RODDEY, and BOLTON, was appointed to carry out the plan.

Some fifteen or sixteen standing Committees, on different departments of medical science, were called upon, but failed to report, and were therefore continued.

Dr. RODDEY read a report in regard to the Herbarium and Pathological cabinet.

Dr. BOLTON read a report on the "adulteration of drugs" prepared by JOSEPH LAIDLEY, Esq. of Richmond. The thanks of the Society were awarded *to Mr. LAIDLEY*, and his suggestion that a committee

should be appointed to investigate the frauds practised in the preparation of drugs was adopted.

(The President failed to appoint the committee.)

Dr. GOOCH moved that a committee be appointed to consider the propriety of resisting the tax on practising physicians. (Atkinson, Scott, Hurt.)

The reports of the Treasurer, and of the Executive Committee, were read and accepted.

Dr. ATKINSON, of Danville, said that he had observed a serious error in the minutes of the last meeting, and that he moved it be corrected.

The correction proposed by Dr. ATKINSON was made, so that the Constitution may now be amended at any regular meeting by a vote of two thirds of the fellows present, or, if twelve months notice of the proposition be given, by a majority of the fellows present.

Resolutions of respect for the memory of DANIEL TRIGG, M. D., of Abingdon, who had died since the last meeting of the Society, were proposed and passed.

Dr. ATKINSON reported that the Committee on the propriety of resisting the unjust tax imposed upon physicians, had consulted high legal authority, and begged leave to present a written opinion, in which the tax was declared to be in opposition to the spirit, if not to the letter of the Constitution, and the opinion expressed that this view would be sustained by a Court of Justice. After discussion, the whole subject was laid upon the table.

Dr. ATKINSON proposed to amend the Constitution so that the Society should meet annually in such a place as might be selected at the preceding meeting, instead of meeting uniformly in Richmond.

This proposition failed, and it was determined to meet annually in Richmond in April, and to meet in some other town on the fourth Tuesday of October.

The following gentlemen were elected delegates to the American Medical Association for 1853:

Drs. B. R. Wellford, Jas. Beale, George Lee, T. P. Atkinson, E. C. Worsham, C. P. Johnson, F. W. Roddey, R. M. Taliaferro, Wm. T. Taylor, A. S. Payne, C. R. Palmore, J. H. Claiborne, R. K. Taylor, G. L. Upshur, L. S. Joynes, J. H. Conway, J. W. Walke, R. Wellford, A. G. Grinnan, P. Trent, P. C. Gooch, A. C. Spencer, A. G. Wortham, W. D. Haskins, D. H. Tucker, W. Selden, F. Deane, J. N. Broocks, J. G. Skelton, T. Creigh, G. T. Yerby, Pat. Pattillo, H. E. Smith, J. F. Peebles, Sam'l Patteson, M. H. Houston, J. J. Thweatt, Jno. A. Chilton, A. Snead, O. A. Crenshaw, R. R. Ritchie, J. W. Williamson, T. Withers, C. Minor, A. T. B. Merritt, Hume Field, R. Gholson, W. R. Vaughan, and J. G. Cabell.

The following resolution was adopted, and ordered to be forwarded with the credentials:

Resolved, That in order to secure a full representation, those delegates present at New York shall be empowered to appoint alternates for those who may fail to attend.

During the session the following resolutions were passed by a unanimous vote:

1. *Resolved*, That the Medical Society of Virginia cordially approves

the reforms in medical education recommended by the American Medical Association.

2. *Resolved*, That our delegates be and they are hereby instructed to support such changes in the constitution of the Association as will exclude from representation in that body all colleges and schools which do not conform to its recommendations on the subject of medical education.

The Committee appointed last year to urge upon the legislature the passage of a bill, constituting a Board of Medical Examiners, whose certificate should be requisite for all future candidates for medical practice in Virginia, were called upon for their report, and Dr. HASKINS, the chairman, presented a printed address on this subject, which, he stated, had been largely disseminated among the profession of the state. The legislature had taken no action on the subject.

After some comment on this address, the whole subject was laid upon the table, and the Committee was discharged.

On motion of Dr. BOLTON the Society adopted the code of ethics of American Medical Association.

Dr. FISHER proposed that the Society should award a medal or other testimonial, not to exceed fifty dollars in value, for the best essay on some medical subject, and that a committee of three members be appointed to adjudge this prize.

The proposition was adopted.

Dr. WORSHAM moved that a committee should be appointed to draft a plan for a fund for the relief of decayed practitioners, and for the widows and orphans of deceased physicians, and that they should report at the next meeting. Unanimously adopted. (Beale, Worsham and Maupin.)

On motion of Dr. PARKER, the Society recommended the American Medical Association to take into consideration the propriety of appointing a chemist, to analyse the various nostrums of the day—the result of his researches to be published in a newspaper in each State of the Union.

The President then delivered his address.

The following Officers were elected for the ensuing year:

President. Dr. ATKINSON, of Danville.

Vice Presidents.

Dr. C. P. JOHNSON, of Richmond. Dr. THOS. CREIGH, of Greenbrier.
H. G. WORSHAM, Dinwiddie. A. T. B. MERRITT, Richmond.
C. B. GIBSON, Richmond. F. STRIBLING, Staunton.

Rec. Secretary. Dr. P. C. GOOCH. *Ass't.* Dr. R. A. LEWIS.
Cor. Secretary. W. D. HASKINS. *Ass't.* F. W. RODDEY.

Treasurer. Dr. JAMES BOLTON.
Librarian. W. J. CLARK.

Committee on Nominations.

Dr. W. D. HASKINS, *Chairman.*
Dr. R. W. HAXALL, Dr. J. A. CUNNINGHAM,
S. MAUPIN, F. H. DEANE.

Committee on Publication.

Dr. P. C. GOOCH, *Chairman.*
Dr. JAMES BOLTON, Dr. G. A. WILSON,
C. S. MILLS, A. E. PETICOLAS.

Executive Committee.

THE OFFICERS OF THE SOCIETY, (*ex officio.*)
Dr. A. SNEAD, Dr. S. MAUPIN,
G. A. OTIS, A. G. WORTHAM.
G. A. WILSON,

The following physicians were elected honorary fellows of the Society:

Dr. BENNETT DOWLER, of New Orleans.
BROWN SEQUARD, of Paris.
SAMUEL CARTWRIGHT, of New Orleans.
WILLIAM GIBSON, of Philadelphia.
JAMES BEALE, of Virginia.

Thanks were voted to the President and officers for the efficient discharge of their duty, and a copy of the President's address was requested for publication.

Dr. ATKINSON invited the Society to meet at Danville in October next.

Unfinished business was referred to the executive committee.

The Society then adjourned.

MEDICO-CHIRURGICAL SOCIETY OF RICHMOND.

TUESDAY, APRIL 19TH. DR. DOVE, PRESIDENT, IN THE CHAIR.

The President commenced the proceedings by calling upon Dr. GIBSON, who discussed at length the subject of "Inflammation and Ulceration of the Cervix Uteri." (See page 101, *ante.*)

Dr. BOLTON considered it strange that men of equal experience and habits of observation, with equally good eyes, and a class of cases precisely similar, should arrive at such opposite conclusions in regard to this affection. And yet the greatest discrepancy of opinion was to be found everywhere. Ashwell and Robert Lee, notwithstanding the wide field of observation which they enjoyed, declared that they had rarely or never met with this pathological condition, while Bennett and others insisted upon its frequent occurrence and its powerful influence in determining uterine diseases and disorders of the general system. In this country there was no greater unanimity on this point. One physician would report numerous cases of engorgement and ulceration *of the neck* of the uterus cured by local treatment; and another with

an equally extended practice would positively deny the existence of this condition. There was no means of reconciling such positive and conflicting statements.

It is a little remarkable, Dr. BOLTON continued, that I have hardly ever seen a case of ulceration of the cervix uteri. When I resided in the lower part of the town I frequently had charge of women of not even doubtful reputation, and whenever they had leucorrhœa or other symptoms of uterine derangement I subjected them to a physical examination, yet I never saw this condition, which is represented as so frequent. I think that I can see as well as any one. I scarcely ever use a lens for the examination of small objects, and I see distant objects equally well, but whether the fault be in vision, or whatever it may be, such is the fact.

Accordingly unless an absolute necessity demanded it, I have avoided the employment of the speculum. I do not recognize the necessity of a physical exploration because uterine disease is supposed to exist. There are many disorders, even of a local character, which we treat without examining them with the eye. All internal diseases are of this nature, and I can conceive of cases of affections of the eye, as these has been adduced as an argument, in which I could and would prescribe without looking at the organ. In cases where all the rational symptoms of scrofulous opthalmia were well marked, and where photophobia excited in an intense degree, I think that an examination would cause more pain and injury than the advantages derived from inspection would compensate for; just as the mortification and wounded delicacy of a female affected with uterine disease would counterbalance any advantages arising from a speculum examination; and accordingly I would defer an examination of the diseased eye until the painful symptoms had been dispelled by general means.

The advocates of the frequency of affections of the cervix uteri open a door for the greatest abuse of the speculum by unprincipled men. While I concede that many believers in this doctrine are high minded and honourable physicians, I cannot doubt that it has been employed by designing men for personal ends. They have excited a panic among females for the purpose of reaping profit from their fears. The notorious Dr. Vanderveer, once an obscure practitioner in Long Island, went to Brooklyn with his speculum and doctrine of ulceration of the os uteri, and his establishment is now frequented by crowds of respectable women, so that it is really unpleasant for any lady to cross the South Ferry to Brooklyn, as they are assailed by the hackmen with offers to take them to Dr. Vanderveer.

I wish to refer to one point in Dr. Gibson's remarks, viz., in relation to inflammation of the cervix uteri as a cause of amenorrhœa. I doubt this. I think that a mechanical obstacle of this sort would be accompanied by symptoms of obstruction, and I am not aware that any evidence of accumulation in the uterus is found in these cases.

Dr. GOOCH agreed with the last speaker that the use of the speculum might be carried too far, but this was no argument against its judicious employment; neither was the fact that we treated internal derangements without ocular inspection any objection to practicing this when it was possible. He did not doubt that every physician would be glad to look *at the stomach* or the liver, in their diseases, if he

could, then why not do the same in the case of the uterus? He (Dr. Gooch) had two cases on hand which displayed in a striking manner the advantages of direct examination and local treatment in uterine disease. One was that of an unmarried woman, aged 35, subject to leucorrhœa for a long period, with constipation, fever and great irritability. The neck of the uterus was small and without ulceration, but intensely red, and the vagina was covered with muco pus. He had applied the solid nitrate of silver to the os uteri, and ordered vaginal injections of the same in solution, with calomel internally. The patient recovered rapidly. The second case he would like to show to any one who doubted the existence of ulceration of the cervix uteri. It was that of a married woman who had had a miscarriage four or five weeks previously. Great inflammation of the uterine neck existed, and a large partially excavated ulcer occupied nearly the whole of the os tincæ.

Dr. G. A. WILSON. Are you sure that the ulcer was excavated?

Dr. GOOCH was positive that it was excavated, and that he had not exaggerated its size. He then examined the testimony of Dr. Robert Lee to show that his returns were founded upon examinations of women not likely to exhibit affections of the cervix uteri.

Dr. G. A. WILSON. I have carefully studied the works of Bennett, Duparque, Lisfranc, and better still that of Whitehead, and they state expressly that where you find an excavated condition in an ulcer of the os uteri, it is proven that it is of a venereal origin. This is why I asked Dr. Gooch whether the ulceration which he mentioned was certainly excavated, for I thought from his description that it was of a specific character.

I have used the speculum, but not a great deal, for having practiced in the rural districts in which these organic affections are less frequent, I have not had many cases which demanded it.

I do not consider an engorged state of the uterine neck conclusive evidence of disease. We know that this is its natural condition for several days preceding and succeeding the menstrual period. Hence I do not consider local treatment necessary for a simple congestion of the os uteri, for a considerable period this is its natural state.

I would like to be instructed on this subject. What degree of uterine affection will justify the use of the speculum? Of course there are cases in which no one will dispute its propriety, any more than the propriety of exposure of a female in the operation for vesico vaginal fistula, and in the operations of obstetrics; but what are the less serious diseases which render the application of the speculum proper and excusable? Would I be authorized in resorting to the speculum in ordinary cases of dysmenorrhœa?

Dr. DEANE. I think that Dr. Gibson has presented a very clear and interesting account of the phenomena of this affection. I do not coincide, however, in all of his positions. Whilst I acknowledge that inflammation of the neck of the womb may produce many if not all of the diseases he has made it the parent of, I by no means admit it to be the sole cause of those affections. In this respect I consider his argument strained and far-fetched. But it is not my intention to discuss this subject, even in regard to those points in which I differ from *him*. *My object* is totally different. I rise only to bear my testimony

as to the frequency or infrequency of inflammation of the cervix uteri.

When the speculum was first introduced as an aid to diagnosis, I was a disbeliever in its efficacy, and felt a decided hostility to its employment. Finding, however, that men of the highest talent and position were the firm advocates of its importance, I determined to yield my prejudices at least so far as to make trial of it myself. I could not consistently oppose it if I had no experience with it. Besides I thought it probable that I might be behind the march of improvement, and from mere obstinancy was perhaps withholding a positive benefit from my patients. With this change of view, I never lost an opportunity for many years of examining every woman who came under my charge who presented symptoms usually regarded as indicating ulceration of the womb, where the social position of the patient rendered it likely that her delicacy would not be peculiarly shocked. I am satisfied that I have examined patients enough to enable me to form an opinion on this subject, yet I do not think I have ever seen an ulceration which was not of a specific nature, and very rarely a granulated condition of the os uteri. I have often seen an engorged, lobulated, indurated state of the womb; but I do not believe that we have the means of relieving this state of things. The anatomical position of the womb so isolates it that I have no idea that this pathological condition can be relieved by leeches, by mercurialization, by iodide of potassium, or any other agent of the materia medica. I have tried them all and found them all unavailing. Neither can these affections be cured by caustic. I believe that irritation, simple engorgement, and granulation, will yield to this agent, but it is powerless against chronic inflammation and induration. The consequence is, that in many cases the body of the uterus participates in the inflammation, and the womb becomes enlarged, and the woman is barren. If a barren woman is examined, this pathological condition will be found to exist in nine cases out of ten, and to constitute an incurable affection.

I do not doubt that physicians frequently encounter what they consider ulceration of the womb and chronic engorgement, which they cure by caustic; I do not doubt their honesty and sincerity, but I think that they are mistaken. They find what they call an ulcer; they apply caustic, and reapply it, with only a few days interval, and after awhile they will have an ulcer, I admit, caused by the remedy. It is only when the interval between the cauterizations is lengthened, from weariness on their part, that the inflammation caused by the remedy subsides, and the patient recovers her former health. My impression is that the efficacy of caustic is too problematical to justify the frequent use of the speculum. If this disease was so frequent, or if caustic was a specific for other diseases of the os uteri, speculum examinations would be justifiable; but while the cases which yield to local treatment are so few, I believe that it should never be used except from serious and well grounded convictions of its absolute necessity.

Dr. SNEAD. I regret that I was not in the room when Dr. Gibson made his remarks, which I learn from those around me were of unusual interest. I do not intend to enter into the pathology of uterine diseases; it has *probably been fully* discussed already; I rise only

to state my experience in relation to the frequency of inflammation and ulceration of the cervix uteri, and its amenability to local treatment.

As regards the moral question of the propriety of examinations with the speculum, my mind is completely at rest. I consider it no more improper to use the speculum than to examine the throat with a spoon, if, in my judgment, an uterine affection exists, upon the character of which I cannot satisfy my mind without a direct exploration. I do not doubt that such a procedure inflicts a severe wound upon the delicacy of a sensitive woman; so do the necessary manipulations of the accoucheur, but as necessity excuses the latter, so do the equally imperative demands of the woman's health justify the former. No gentleman would institute an investigation of this sort unnecessarily, or conduct it without the strictest regard for propriety, but when the best interests of the patient require it, a physician fails to perform his duty if he allows his regard for the feelings of the woman confided to his care to prevent him from making an examination.

I am satisfied that a condition of inflammation with abrasion, erosion or ulceration (call it what you will) of the cervix uteri exists. My experience is limited, but I believe that this affection is of frequent occurrence, and I am astonished that such men as Ashwell and Lee, possessing such vast opportunities for observation, assert that they have rarely or never encountered it. In seven out of ten patients that I examine on account of uterine disorder, I find this state of things. Whenever I meet with persistent leucorrhœa, bearing-down pains, a tendency to strangury, pain in the sacral region, &c., and examine the os uteri, I almost invariably find it abraded, ulcerated and engorged. I, in my limited practice, have cured a dozen such cases, and yet Ashwell and Lee pretend that they have never met with one.

In almost every case I have found that the application of the solid crayon of nitrate of silver relieved this condition. In some it was necessary to persevere in its employment, and in a few to use stronger escharotics, for example, the acid nitrate of mercury, but by a combination of local remedies, I have never failed in relieving the patient. The treatment has in some cases extended to many weeks; in others a few applications of the caustic sufficed to effect a cure. In many instances the general health was deplorable in consequence of the uterine irritation, and it was re-established in proportion as the local disease yielded to treatment.

Dr. PARKER. Owing to the locality in which my office is situated, I have enjoyed the same opportunities for observation which Dr. Bolton has possessed, and after repeated examinations among a class of women most likely to present this affection, I have come to the conclusion that ulceration of the uterine neck is less frequent than it is represented, since I have never yet seen it.

But even admitting the existence of this affection, I am totally unable to understand how so slight a local lesion can produce constitutional symptoms of such gravity; how an ulcer of small dimensions can cause marasmus, anæmia, serious nervous disorder, and utter prostration. An ulcer in no other portion of the body would produce such serious effects as this; certainly not in an organ whose functions are *so intermittent.*

Dr. T. JOHNSON. How would it be about the ileo-colic valve?

Dr. PARKER. There are certainly exceptions, but in this locality even specific ulcerations do not produce half the constitutional disturbance which is attributed to the granular or engorged condition of the cervix uteri.

Dr. T. JOHNSON remarked, that the discussion by some of the members, had been very discursive, and at this late period of the evening, he had no disposition to obtrude himself upon the patience of the Society; yet, he could not withhold his admiration of the ability, the system and order by which the discussion had been conducted by the gentleman who opened the debate; for, high as his reputation is, he had, in Dr. J.'s opinion, fully sustained it, to-night. In the main, he coincided with Dr. Gibson, but in some particulars, he disagreed with him. He did not consider the speculum an instrument to be used, unless under imperative circumstances, nor did he suppose any member of this Society capable of proposing its application unless he was impressed of its importance to the welfare of his patient. As to any immorality likely to arise from the proper use of the instrument, he conceived it to be imaginary; for, when the physician is an honourable man, and acts with propriety, no improper thought is ever connected with such an examination. The surgeon, by an affected delicacy, sometimes produced an embarrassment which otherwise would not arise; and the method of Evory Kennedy, of having a slit, in a sheet thrown over the patient, corresponding to the length of the vulva, was entirely ridiculous. If there were well-founded reasons for suspecting the existence of disease of so important an organ as the uterus, he, like Drs. Snead and Gibson, could see no good reason why it should not be ocularly examined; but he at the same time concurred with Dr. Wilson in the opinion that honour, delicacy, and propriety should induce us to consider the case well, before making so important a proposition as an examination per vaginam. For ocular exploration of the vagina and os uteri, the speculum might, in many cases, be dispensed with; for, three fingers, formed into a cone, introduced, and then expanded like the blades of a speculum, answered most practical purposes very well.

Dr. JOHNSON was surprised to hear any one doubt the existence of such a disease as ulceration of the os uteri, independent of a syphilitic taint; for he could see no reason why simple ulceration should not as readily attack this locality as the mucous membrane of the vulva, the vagina, or any other similar surface. Although excavated ulcer of the os uteri was probably a rare disease, yet it sometimes existed, as he would presently show.

He did not know what particular signification authors and others give to the term cervix uteri. For his part, he had never seen the anatomical cervix uteri in a living subject, nor had any one else unless he was sharp sighted enough to see through the walls of the vagina. The vagina is attached anteriorly to the anterior labium of the uterus very near the os; posteriorly, its attachment is higher up, just where the posterior labium terminates and the neck of the womb commences, consequently, in examinations per vaginam, we never see the real neck of the uterus.

The symptoms which had been so eloquently portrayed this evening did not always arise from ulceration or even abrasion of the os uteri.

In order to understand the subject under discussion, it was necessary to recur to the pathology of the vagina and the uterus. From numerous causes vaginitis was a frequent disease, and by mere continuity of surface, it might extend not only to the os uteri, but into the uterine cavity, or even into the fallopian tubes. Either of these conditions cause blenorrhagia, which frequently becomes a source of great annoyance, and if profuse, the system seldom fails to sympathise with it. But as frequent as this affection is, it is not as much so as some writers pretend. Lisfranc, from examinations of the linen at a large washing establishment, concludes that all the ladies of Paris have it—he who was never in the society of a lady; and Ricord says ninety-nine and a half (!) per centum of his patients labour under it at some period during each month. Surely such statements as these are not to be relied upon.

When blenorrhagia exists for a long time, or has been acute, excoriations of the mucous surface may result, and patches of it may often be traced from the vulva along the vagina into the os uteri. The existence of these excoriations is not always very manifest, but they may be made very perceptible by a simple experiment. If the parts are pencilled with a ten grain solution of nitrate of silver, they at once become of a dirty white colour, thus mapping them out with clearness.

These surfaces may become rough or slightly granular. Sometimes large fungous granuli sprout out from the abraded surface in the form of what Kennedy calls cock's comb granulation. He had seen the vagina almost filled with granulations, which yield very readily to frequent applications of nitrate of mercury. He had seen the lips and the mouth of the womb literally obscured by an abundant crop of granulations.

Dr. Johnson was surprised to hear it stated that only specific or malignant ulcerations attacked the uterus. Such he was convinced was not the fact, for, he, as well as other gentlemen here present, had seen excavated or depressed benign ulcerations of this organ, particularly upon that part which projected into the vagina. Ulcerations of the uterus, except the syphilitic, generally produced much uterine hæmorrhagy, not from the surface of the ulcer, as was frequently imagined, but from the rupture of the congested vessels within that organ.

The treatment of the uterine conditions which had just been under consideration was very simple. If simple vaginitis, or metritis, or both existed, cold water freely applied by a gum elastic bag and tube, three or four times a day, was usually successful. This treatment might be aided by counter-irritation, leeching, and such other remedies as are applicable for subduing inflammation. The free use of cold ablutions not only acted as refrigerants, but the water washed out the morbid secretions from the parts which were calculated to keep up the irritation. In cases of slight excoriations, slight astringent mixtures, such as a solution of sulphate of zinc, or acetate of lead, were frequently useful auxiliaries to the cold water injections.

A strong solution of the nitrate of silver, as an application, for ordinary granulations, was generally sufficient to cut them down, thereby permitting the ulcerated surface to heal. But this remedy should be *perseveringly* applied. When the granulation was large, or extensive,

the solid lunar caustic, or the nitrate of mercury, acted with more vigour, and consequently were preferable.

For benign excavated ulcers, there was no topical application equal to the nitrate of mercury, applied once a week.

When these remedies failed, tonics, change of air, &c. were sometimes successful, by invigorating the general system. With this view, sea-bathing, or a trip to the mountains of Virginia, often acted like a charm.

The subject of "Sore Throat" was selected for the first meeting in May, and Dr. DEANE was appointed to open the discussion.

The Society then adjourned.

CHRONICLE OF MEDICAL SCIENCE.*

The translations and abstracts under this head, are made expressly for this Journal.

ANATOMY, PHYSIOLOGY, AND ORGANIC CHEMISTRY.

1. *Structure of the sensitive papillæ of the skin.* By GALACH.

In the *Comptes-rendus des travaux de la Société physico-médicale d'Erlangen*, we find a communication from M. Galach, in which he asserts that he has determined the existence of the corpuscula tactûs, discovered by Rudolph Wagner.† These are the results of the researches of M. Galach. 1. There are two entirely distinct varieties of papillæ in the dermoid system: capilliform and collinifórm papillæ, the histological elements of which are identical with those of the skin. 2. There are no papillæ without vessels as Wagner pretends. The papillæ frequently present ridges, which are sometimes destitute of vessels; but a careful examination always demonstrates the capillaries entering the papillæ, and often penetrating the ridges.‡ 3. The corpuscula tactûs of Wagner exist; they are found either high in the papillæ, towards their free extremities, or else in their ridges. Each tactile corpuscle is provided with several nervous filaments, which frequently form loops in the form of a cork-screw. It is precisely this arrangement of the nervous filaments which is the essential character-

* NOTE.—Editorial comments are enclosed in brackets, [ ]. When a simple abstract or condensation is furnished, the name of the source from which it is derived appears in parenthesis.

† See *Am. Journal of Med. Sciences*, April 1853, p. 447.—[ED.

‡ See Todd and Bowman. *Physiological Anatomy*. Am. ed., p. 357.—[ED.

istic of the corpusculum tactûs of Wagner, and which appears to be of great importance to their physiological function. 4. The corpuscula tactûs seemed destined for the perception of the stereometric proportions of bodies alone, and not at all for general sensation. This explains why they are not found in the dermoid system of the penis, or in the cutis where it is in relation to the inferior surface of the nails, parts which are endowed with very great sensibility. In future it will be necessary to distinguish the papillæ of general sensation from the tactile papillæ.—*Revue Médicale de Cayol*, Feb. 28.

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2. *Researches upon the obliteration of the epididymes.* By M. Gosselin.

These researches were made in cases in which there had been an epididymitis upon both sides, and in which an indurated knot remained on each epididymis. The results confirmed the hypothesis advanced by M. Gosselin, after his anatomo-pathological researches in 1847, that is to say: that individuals in whom this condition exists, ejaculate a semen deprived of spermatozoa, which is secreted entirely by the vesiculæ seminales, the epididymes being obliterated at the point of induration.

The investigations were made in seven patients at the Hospital du Midi. Several of them furnished semen on two occasions. In six, a careful microscopical examination failed to discover a single spermatozoon, and yet the semen resembled the ordinary secretion in quantity, consistence, odour, and chemical characters. In the semen of the seventh patient, spermatozoa were found, but in his case, the induration of the left epididymis was very slight. None of these individuals had perceived any diminution in their virile powers.

These researches, which M. Gosselin is still prosecuting, suffice already to establish:

1. That double epididymitis can cause sterility without impotence.
2. That the spermatic liquid is formed chiefly by the vesiculæ seminales, and that, in the healthy state, the testicle only adds the spermatozoa or the substance from which they are produced.
3. That, in view of the possibility of obliteration, it is important to treat epididymitis with greater care than is usually done, especially when the disease appears successively on the right and left sides.

M. Gosselin proposes to administer iodide of potassium in large doses, towards the close of the treatment, while the plastic matter effused in the circumvolutions of the epididymis is still susceptible of absorption.—*Compte rendu de la Société de Biologie.*

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3. *On the Muscles which open the Eustachian Tube.* By Joseph Toynbee, Esq., F. R. S.

[This paper was read at a meeting of the Royal Society on February 17th.]

The author commenced by alluding to the opinion generally held by *anatomists, viz:*—That the guttural orifice of the Eustachian tube is

always open, and that the air in the tympanum is constantly continuous with that in the cavity of the fauces. An examination of the guttural orifice of the tube in man and other animals has led the author to conclude, that, except during muscular action, this orifice is always closed, and that the tympanum forms a cavity distinct and isolated from the outer air. The muscles which open the Eustachian tube in man are the tensor and levator palati, and it is by their action, during the process of deglutition, that the tubes are ordinarily opened. That the act of swallowing is the means whereby the Eustachian tubes are opened, is shown by some experiments, of which the following may be cited:—If the mouth and nose be closed during the act of swallowing the saliva, a sensation of fulness or distension arises from the air, which is slightly compressed in the fauces, passing into and distending the tympanic cavities. Upon removing the hand from the nose, it will be observed that this feeling of pressure in the ears does not disappear, but it remains until the act of deglutition is again performed, while the nose is not closed. In this experiment the Eustachian tubes were opened during each act of deglutition; during the first act, while they were open, air was forced into the cavity of the tympanum by the contraction of the muscles of the fauces and pharynx, and the guttural orifices of the tubes remained closed until the second act of swallowing, which opened the tubes, and allowed the air to escape. That the act of deglutition opens the Eustachian tubes was inferred also from the custom usually adopted of swallowing while the descent in a diving-bell is performed; by this act the condensed air is allowed to enter the tympanum, and the sensation of pain and pressure in the ears is removed or entirely avoided. The author gives an account of the Eustachian tube and its muscles in mammalia, birds and reptiles. In some mammalia, the muscles opening the tubes appertain as in man to the palate; in others, this function is performed by the superior constrictor muscles of the pharynx. In birds it is shown that there is a single membranous tube into which the two osseous tubes open; this membranous tube is situated between, and is intimately adherent to, the inner surface of each pterygoid muscle, and by these muscles the tube is opened. The conclusion to which the author arrives respecting the influence of the closed Eustachian tubes, is, that the function of hearing is best carried on while the tympanum is a closed cavity, and that the analogy usually cited as existing between the ordinary musical instrument the drum and the tympanum, to the effect that in each it is requisite for the air within to communicate freely with the outer air, is not correct. On the contrary, the author shows that no displacement of the air is requisite for the propagation of sonorous undulations, and that, were the Eustachian tubes constantly open, these undulations would extend into the cavity of the fauces, there to be absorbed by the thick and soft mucous membrane, instead of being confined to the tympanic cavity, the walls of which are so peculiarly well adapted to the production of resonance, in order that they shall be concentrated upon the labyrinth.

In corroboration of the above views, the author states, that in cases of deafness, dependent simply upon an aperture in the membrana tympani, whereby the sonorous undulations are permitted to escape into the external meatus, the power of hearing has been greatly improved

by the use of an artificial membrana tympani, made of very thin vulcanized India-rubber or gutta percha, which is so applied as again to render the tympanum a closed cavity.—*Medical Times & Gazette*, Feb. 26th, 1853.

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4. *Effects of the division of the cervical portion of the great Sympathetic.* By CLAUDE BERNARD.

In the course of the last year M. Claude Bernard made upon the living animal one of those experiments so pleasing to the mind on account of the accuracy of the results which it illustrates. After having destroyed the cervical portion of the great sympathetic nerve, he showed that the calorification was materially modified in all the corresponding side of the head. At the same time other equally unexpected phenomena were produced, viz: contraction of the pupil, closing of the palpebral opening, retraction of the globe of the eye towards the bottom of the orbit, and more or less stricture of the nostril and mouth on the corresponding side. The Academy having received at its session before the last, from two distinguished strangers, M. Budge and M. Waller, communications upon the same subject, M. Bernard desired to review the history of the question, and to recall (proof in hand) the principal facts which he himself had established. This retrospective review will not be objected to as it enables us to give some interesting particulars which had not been before recorded. They relate to the action of galvanism upon the superior divided end of the great sympathetic, showing how this imponderable agent supplies the nervous influx, even surpassing its normal action in the most curious manner. If the galvanism be applied to the superior end of the great sympathetic, a certain time after its division, all the phenomena which had been produced under the influence of the lesion change their character and become opposed. The pupil enlarges, the palpebral opening increases, the eye projects beyond the orbit. However active, the circulation becomes feeble, the conjunctiva, the lips, &c., which were red, becoming pale. If the galvanism be withdrawn, all the phenomena at first produced by section of the nerve reappear slowly, to disappear again under a second application of the electric current. The experiments can be prolonged, and repeated at pleasure, and always elicit the same facts. If a drop of ammonia be introduced into the eye of a dog, on the side upon which the sympathetic has been destroyed, the pain causes the animal to hold the eye firmly and constantly closed. But if the superior end of the cut nerve be galvanised, in spite of the pain, the animal cannot keep the eye closed, the eye lids separating to their greatest limit, and the redness from the conjunctiva caused by the ammonia, disappearing at the same time.—*Review of proceedings of the Institute*, by LEON FOUCAULT—*Feuilleton du Journal des Débats*, Mar. 19, 1853.

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5. *Analysis of Liquor Amnii, with Remarks.* By Dr. ODLING.

"The fluid had the appearance of the serum of blood, it contained *a few flocculi*, peculiar, and of a very cheesy smell; there was alkaline

reaction; it was coagulable by heat, by the addition of alcohol, and by acetic acid; with liquor potassæ there was no marked change. Sp. gravity 1009·17.

Analysis.

983·09 Water.
9·86 Aqueous Extract + Salts.
6·17 Albumen.
·25 Earthy Phosphates.
·60 Fat.

999·97

The apparent exactitude of the analysis does not depend upon the accuracy of the experiments so much as upon the mode of calculation—a mode rendered necessary by the small available amount of material to be operated upon. Each amount is the result of one experiment only; excepting the estimation of the aqueous extract, which is deduced from a mean of two experiments. The analysis was performed as carefully as could be, in a case where no means of controlment existed.

The salts of the aqueous extract, which constituted by far its largest amount, consisted chiefly of muriate, phosphate, sulphate, and carbonate of soda.

Benzoic acid in considerable proportion was obtained from the aqueous extract; but not a trace of urea could be detected.

It is observable that the amount of fat was very small, no sugar of milk existed. (N. B. The alleged existence of sugar of milk in the liquor amnii of the cow has been adduced as an argument in favour of the notion that the fluid contributes to the nourishment of the fœtus.)

According to all published analyses, the liquor amnii has a very variable constitution. Its specific gravity varies from 1005 to 1012; the amount of albumen from less than 1 to as much as 10 parts per 1000. It is quite clear that the liquor amnii sometimes does contain, and sometimes is entirely free from, urinary products.

The benzoic acid detected in this instance, was undoubtedly a result of the decomposition of hippuric acid.

The urine of the newly-born infant always contains hippuric acid in large proportion, and it is very probable that the urine of the fœtus does contain still more of this most highly carbonised urinary ingredient.

If, then, we consider the liquor amnii only contains hippuric acid, when it has received the urine of the fœtus, it is obvious that in those cases where hippuric acid is detected, so likewise should urea be discovered. Both hippuric acid and urea, however, speedily undergo decomposition in an alkaline fluid; the hippuric acid into products, of one of which (benzoic acid) can be recognized with precision; the urea into products which do not necessarily indicate their origin.

Probably in those cases where most of the tissues are more or less impregnated with urea, in consequence of some kidney affection, this substance would be found in the liquor amnii, independently of any fœtal micturition.

It is to be observed that urea has never been recognised in the liq. amnii, with absolute *chemical certainty*, though from the experiments *performed, the inference in some* cases is highly probable.

The bladder of newly-born infants is known to vary considerably with regard to its full or empty condition.

It is highly probable that the fluid secreted by the Wolffian bodies does differ in some points from the true renal secretion, and possibly hippuric acid may enter more largely into its composition.—*Guy's Hospital Reports.*

MATERIA MEDICA, PHARMACY, AND MEDICAL CHEMISTRY.

6. *On the methods of rendering Water charged with the Salts of Lime fit for domestic purposes.* By M. MORIDE.

The *hardness* of water depends principally upon the quantity of salts of lime, of alumina, and of magnesia, which it contains. The lime is precipitated by oxalic acid; and the magnesia and alumina are separated by means of ammonia. In adding these two reagents in such quantity that the oxalate of ammonia should be proportional to the superabundance of lime contained in the water, and that the ammonia should be in excess to precipitate the alumina and magnesia, I have been able easily to solve the problem of rendering waters which curdle soap fit for washing and other economical purposes.

My method of operating is very simple. I dissolve in a quart of water two ounces of oxalic acid and three ounces of liquor ammoniæ. I shake the whole together and pour it into four hogsheads of the water, the properties of which are to be modified. These proportions will serve generally even for very selenitious water.

Of course the same quantities of these reagents should not be employed for all sorts of water, which vary according to the countries and the strata of the earth through which they flow. Therefore a preliminary experiment should always be made, which consists in adding a glass of the above solution to a hogshead of water, mixing it well, and testing it with soap. If it does not form a lather the solution is to be added by half glasses until it does. The quantity of the reagent required for four hogsheads of water is then calculated. By employing a glass containing half a pint the proportions can be estimated by persons entirely ignorant of chemistry.

This method is of course inadmissible in water which is to be used for drink.—*Journal de Chimie Médicale*, March 1853.

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7. *Researches upon Opianine.* By M. HINTERBERGER.

This alcaloid exists in the opium of Egypt, and has been discovered by M. Hinterberger under the following circumstances: M. Kugler, a pharmaceutist of Vienna, some years ago had occasion to treat large *quantities of Egyptian* opium for the purpose of extracting the mor-

phia. The infusion of opium was precipitated by ammonia, the precipitate washed first with water, then with cold alcohol, was dried and dissolved in boiling alcohol. The solution, deprived of its colour by animal charcoal, deposited upon cooling crystals of morphia, which were mixed with a large quantity of other crystals having the external appearance of narcotina. After a new solution in alcohol, the morphia remained in the mother water while all the other crystals separated from the liquor. M. Hinterberger having examined these crystals, demonstrated that they constituted a new alcaloid, for which he proposes the name of *opianine*. Opianine crystalises in long, transparent, brilliant, colourless needles. When precipitated from solution by ammonia, it presents the form of a light, white powder. It is inodorous, but its alcoholic solution has a persistent bitter taste. It is insoluble in water, and only dissolves in a large proportion of boiling alcohol, from which it separates upon cooling. The alcoholic solution possesses a strong alkaline reaction. Its solutions are precipitated by the fixed alkalies in the form of white flocculi. With the chlorides of platinum and mercury, this base forms double compounds. Concentrated sulphuric acid does not alter it; while nitric acid dissolves it with a yellow colour. Sulphuric acid containing nitric acid gives a blood-red colour, which soon passes into a clear yellow. Its composition is expressed by the following formula: C^{66} H^{36} N^{2} O^{21}. When an aqueous solution of corrosive sublimate is added to an alcoholic solution of the hydrochlorate of opianine, a voluminous white precipitate is formed. It may be obtained crystalised by dissolving it after drying in a mixture of two parts of alcohol and one of concentrated muriatic acid, and adding small quantities of distilled water to the liquor until the trouble which forms becomes permanent. A slight heat will cause this turbidity to disappear, and at the end of twenty-four hours groups of concentric needles are deposited, represented by the following formula: C^{66} H^{36} N^{2} O^{21} H Cl, Hg Cl.

According to M. Hinterberger opianine is a narcotic similar in action to morphine. Two cats, to which he gave one 0.145 of morphine, to the other the same dose of opianine, exhibited the same symptoms of prostration, but the dose was not sufficient to kill them.—*Répertoire de Pharmacie*, February 1853.

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8. *Therapeutic Properties of Belladonna.* By M. Dubois.

[We reproduce with pleasure the following conclusions, at which the author arrives in a prize essay on this subject, for we believe that the remedy which he extols is underrated by the profession in this country. Trousseau, in the best book on therapeutics that has ever been written, places belladonna in the same rank with calomel, opium and iodine, and the opinion of such a man alone should induce physicians to make a faithful trial of the remedy. We feel confident that those who do so will not be disappointed in the result.]

"1. That belladonna is not without efficacy in some phlegmasiæ, especially in those of the globe of the eye;

2. That it is the best remedy known in the photophobia which so frequently accompanies inflammations of the eye;

3. That its power as a prophylactic in scarlatina can hardly be contested;

4. That it sometimes cures certain hœmorrhages, such as hæmoptysis, hæmatamemis and metrorrhagia;

5. That it is the remedy *par excellence* for neuralgia, for whooping cough, and most of the neuroses;

6. That it is the remedy *par excellence* to combat pain, especially when external;

7. That it alleviates more than any other remedy the pains of cancer, and cures sometimes, if not cancer, diseases closely resembling it;

8. That it can be advantageously employed in spasmodic contraction and occlusion of the pupil; to reduce procidentia of the iris and to break up adhesions; to prevent the inflammation of the iris so frequent after this operation; to maintain dilatation of the pupil, and to diminish the chances of adhesions after the operation of couching; to prevent secondary cataract; to re-establish vision temporarily at least, when the lens is opaque in the centre, or when there are opacities of the cornea; to assist the diagnosis in some diseases of the eye;

9. That it is of real efficacy in some cases of strangulated hernia;

10. That its property of facilitating labour in spasmodic constriction of the uterine neck is powerful and incontestible;

11. That it produces advantageous results in some cases of fissure of the anus;

12. That its employment may be more or less useful in spasmodic contraction of the bowels, in constipation, in spasmodic constriction of the rectum, of the anus, and of the vulva; in phimosis and paraphimosis, spasmodic stricture of the urethra, retention of urine, strangury, spasmodic stricture of the larynx and esophagus; in blepharospasm, incontinence of urine, nephritic colic, hemorrhoids, &c.

13. Finally, that belladonna should be placed in the first rank of medicinal substances.—*Bulletin of the Medical Society of Gand—(Gazette Médicale.)*

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9. *On the Action of the Subnitrate of Bismuth.* By Dr. FILIPPO LUSSANNA.

The subnitrate of bismuth, a medicine already well known, has been lately used with new indications and pharmacological applications. Notwithstanding the fear which previously existed of its local caustic action, Monneret has recently recommended it in large doses as a topical (internal) anodyne in various gastro-intestinal affections, gastralgia, diarrhœa, dyspepsia, and cholerine. He, following the fashion of many of his countrymen, ignored almost every general action of this preparation, and declared that its therapeutic efficacy is purely local, and that, far from being irritating, it is absorbent and calming. Monneret has rendered much service to science, by destroying, so far as this remedy is concerned, the Orfilian scare-crows which still not a little impede the rational interpretation of pharmacological facts. But, at the same time, I do not believe that all his deductions are correct and true, when he entirely denies the general effects of this metal. Following his directions, I have administered the subnitrate of bismuth in the large doses given by him. The patients so treated were affected with

tubercular diarrhœa, diarrhœa the consequence of chronic enteritis, gastralgia of long standing, and mesenteric disease. From the study of the effects of this remedy, I have been able to deduce the following inferences:

1. It is true that it does not give rise to intestinal irritation.
2. I have not seen it arrest tubercular or mesenteric diarrhœa.
3. The fæces always acquired a blackish-yellow colour, owing to the unassimilated portions of the medicine being converted into sulphuret of bismuth by contact with the sulphuretted hydrogen of the fæcal masses.
4. The excrement, although still presenting the characters of diarrhœa were always rendered less liquid in consequence of admixture with the powder.
5. The subnitrate of bismuth is in part assimilable, and some portion of the large quantity swallowed is really dissolved and absorbed. This takes place with many other medicines, of which only a portion can be dissolved and absorbed, while the remainder passes unacted on (when the remedy has been given in large doses) through the intestine. Such is the case with calomel, iron and kermes, among metallic preparations.
6. The assimilation of the subnitrate of bismuth is due to the acid action of the fluids of the stomach, which render it soluble. Any portion that reaches the intestine, whether undissolved or dissolved, cannot be digested and absorbed, because the alkaline chlorides of the intestinal tube have no solvent effect upon it, and precipitate it if dissolved. In this second point of view, Monneret would be quite right in denying the effects of this salt on the economy in general, and in denying its absorption. The subnitrate of bismuth is soluble in acidulous matters, and, consequently, can be digested in the stomach. Thus we can understand how Trousseau and Pidoux, who also were ignorant of the general action of the salt, should, notwithstanding, caution us against administering it when gastric affections are attended with eructations,—in which, say they, "the medicine almost always fails;" since, by rendering it more soluble and assimilable, the presence of acid developes its dynamic action.
7. The non-appearance of the subnitrate of bismuth in the urine does not exclude the possibility of its having been introduced into the circulation. In fact, the subnitrate, having entered the current of blood, is, by the action of the alkaline chlorides of the serum, restored to the state of an insoluble subsalt, and thus becomes incapable of passing off by the uriniferous emunctory.
8. The effects of bismuth thus introduced into the economy are colliquative and scorbutic. The patient acquires a leaden aspect; the eyes become sunken, and present a livid subpalpebral circle; the breath is rendered offensive; the gums swell, grow livid, and discharge a sanious blood; hemorrhage is easily excited, and sometimes profuse passive hemorrhages arise. I had once under my care a case of a dangerous and repeated epistaxis produced by it in mesenteric tuberculosis. Sometimes blood is seen in the expectoration; finally, the alvine dejections are occasionally melenic. Everything announces a solvent action on the globulin, similar to that produced, according to the experiments of Dumas, by *the chlorides* of potassium, sodium, and ammo-

nium, which dissolve blood corpuscles. It might be classed among Miahle's fluidifying agents.

9. Therefore, when we wish to prevent the absorption, or the true medical action of the subnitrate of bismuth, to localize its action, and produce none but its mechanical absorbent effects, the rational mode will be to precede or accompany its administration by the exhibition of an antacid, as, for example, calcined magnesia, so as to neutralize and fix the solvent acid gastric fluids. And this, of course, will also be the chemical antidote of the preparations of bismuth, with the view of preventing their assimilation, while the preparations of iron and stimulants will be useful in counteracting their general or dynamic effects of producing scurvy,—fluidifying and dissolving the hematin.—*Gazzetta Medica Toscana*, 1852, p. 44.—*Dublin Quarterly Journal*, Feb. 1853.

OPHTHALMOLOGY.

10. *Note upon direct Depletion from the Eye.* (*Communicated to the Royal Academy of Medicine of Belgium.*) By M. DESMARRES.

I would ask of the Academy the permission to explain briefly a small operation which seems to me to be of great practical value in ophthalmic surgery. It is simply practicing upon the eye in certain pathological conditions, scarifications, or a veritable bleeding, by means of an instrument, which, for the rest, need not be considered an instrument, since it is simply a lancet modified and fixed into a handle like that of the cataract needle. The ancients knew the advantages of scarifying the eye in certain pathological conditions; but the applications which they made of this means of treatment were very limited, and they opened the vessels of the surface of the eye with very rough and unsuitable instruments, serving themselves sometimes with the blades of vegetables, and sometimes with splinters of wood more or less rough.

I do not generally require an assistant for the operation; the eyelids are separated by means of the index finger and thumb, and by moderate pressure upon the eye I maintain the organ fixed. Then, with the little instrument alluded to, I make either the scarifications or the bleeding, according to the nature of the case, by dividing the vessels across. I will explain presently under what circumstances it is important to perform the one or the other operation. When scarifications are the object, the cutting instrument is carried parallel to the cornea upon the perikeratic vessels, and in a measure upon the vessels of anastomosis between the external and internal vascularisation of the eye. Too great a pressure upon the eye is to be avoided, and from time to time the eyelids are abandoned in order to allow them to re*move the clots* which form. By this process an immediate disengorge-

ment of the vessels is effected. When it becomes necessary to repeat the scarifications often or to practice them upon more distant parts, it will be necessary to push the superior eyelid very high up, and sometimes to divide the membrane of the bulb more or less deeply.

On the other hand, when I wish to practice what I call *bleeding the eye*, it is necessary to proceed in the same way as upon the vessels of the arm. The conjunctiva and subjacent vessel are divided at the same time and in sufficient extent. But the choice of the place is important. It does not answer the same purpose to attack one of the large vessels ramifying in the sub-conjunctival cellular tissue at the lower part of the eye, as to attack it at the superior part, and the reason is obvious—when we are in the ordinary attitude, the eye directs itself preferably from above below. If the transverse section of the vessel be practiced at the inferior part of the eye, the result is that the wound is instantly closed, a thrombus more or less voluminous formed, and the bleeding arrested. If, on the contrary, the incision be made in the superior part of the eye, upon one of the large vessels parallel to the superior rectus muscle, then the patient naturally looking down, the wound will remain open, and in this way the bleeding amounts sometimes to an almost incredible quantity.

The son of the honourable president of the Academy has seen at my clinique in Paris a man who had been wounded in the eye by the flying off of a splinter of wood which he was cutting. The most energetic treatment had been applied without subduing the inflammation or relieving the pain. I practiced *bleeding the eye* upon him by dividing across one of the large vessels half a centimetre above the cornea. The blood which escaped amounted to more than two ounces, and it was necessary to arrest it by means of compression, otherwise the hemorrhage would have been too great. We must say that so great a depletion cannot always be obtained by a direct bleeding of the eye; but when the blood flows for two or three minutes only it will suffice to give the most beneficial results with regard to the inflammation.

The physiological effects of this operation are so easily appreciable that it would be useless to detail them. I will, however, remark that the pain in every case of internal ophthalmia is the immediate results of the compression of the nerves caused by the inflammatory engorgement, and that if the bleeding relieve this engorgement the pain will necessarily subside upon practising the operation. I very often have patients suffering intensely, and upon whom blood-letting and narcotics have no effect, in such cases I always practice the operation under consideration, and have the satisfaction of giving a quiet night's rest to those who have not enjoyed it for some time.

The therapeutical effects of this little operation are as evident as its physiological. It has the effect of arresting rapid and sometimes dangerous inflammations of the eye, upon which the ordinary means have failed, and which if allowed to go on might compromise fatally the organ of vision. Suppose that the cornea were seized with an acute, deep abscess, threatening to perforate it, what could a general plan of treatment, however energetic, do in such a case? If the vessels communicating with the diseased part be divided it will have the effect of arresting the evil, and reduce the inflammation to a simple reparatory process.

The applications of *bleeding the eye* are exceedingly numerous, but I will limit myself to indicating the principal cases in which it ought to be resorted to.

Numerous and repeated scarifications have been of great service to me in the treatment of purulent ophthalmia. The more the application of this operation approaches the commencement of the disease, the greater will be the chances of a speedy cure. Admit, for example, that we may be called to see a patient in the following conditions: The conjuntiva is tumefied all around the cornea, it is incipient chemosis; the eyelids are infiltrated and already considerably augmented in volume, the ordinary discharge from between their edges being replaced by pus. Should we apply the nitrate of silver, certainly not, for the scarifications repeated in ten or twelve places around the circumference of the cornea, would produce such an alleviation of the symptoms, that the nitrate of silver, often so dangerous, would not be necessary. I would enjoin the application of cold water during two hours, and I would prescribe, independent of leeches behind the ear, placed according to the method of Gama in wounds in the head, injections repeated as often as it might be necessary to clean away the discharges. These injections should be made with a feeble astringent mixed with a large proportion of water, (1 part of alum to 200 parts of water.) But it might be a more advanced state of purulent ophthalmia; the chemosis might be more considerable, and the conjunctiva instead of being red and vascularised, as at the commencement of the disease, might be pale, discoloured, and of a lardy appearance. A single application of the scarifications in the direction of the recti muscles, as did Tyrrel, would not be sufficient; it is necessary to repeat the operation as often and as long as the continuance of the swelling would render it necessary. The scarifications then should be repeated twice a day, and it is above all necessary to approximate and repeat them around the cornea, and to make them deep in order to relieve the strangulation of this membrane. The scarificator should even be carried into the palpebral conjunctiva, and the incisions kept open and bleeding by the application of warm water.

Every surgical means has its bad side, and I ought to add that the application of this is attended with severe pain. But when leeches have been applied, when bleeding to anemia has been practiced, when cauterisation has been made, when external and internal treatment has been exhausted, the ophthalmia continues, and the eye is on the point of being destroyed, is it not better to overlook the mere causing of pain, than to omit an operation capable of saving the sight of the patient. Besides, if necessary, we can have recourse to the use of chloroform. I do not know how often in my hands scarification has succeeded both with the adult and the newborn, and I cannot sufficiently recommend its application. In the intense external ophthalmias which present themselves under the form of an abscess comprising a third or fourth of the cornea, the application of this means is one of the most powerful. If, separating the eyelids as indicated, the scarificator be carried towards the summit of the vessels dividing them progressively from the cornea towards the folds of the conjunctiva, the development of the abscess will be arrested, and will thus be prevented from advancing *upon the pupil* and perforating that membrane. Perhaps the operation

will have to be repeated several times; the inconvenience is very great, but the pain is less than in the preceding case, and the scarifications are not so numerous.

In chronic vascular keratitis, more or less complicated with interlamillar effusion, surprising results may be obtained by the application of this means. In the unfortunate cases where the cornea is so troubled that the patient can scarcely see, and upon which all the means of treatment have failed, which nothing modifies, neither nitrate of silver, nor red precipitate, nor laudanum, nor the best directed internal treatment, scarifications, repeated by slight incisions made around the cornea, will cure them or ameliorate them beyond what could be hoped for. The whole circumferential surface of the cornea is not to be attacked at once; a portion of the vessels are divided to-day, and the operation repeated the next day or the day after, according to the state of the eye. This practice is pursued from two to four weeks until the obliteration of the vessels is accomplished and the transparency of the cornea restored. It is when much has been obtained by scarifications that the resolutive applications are of veritable utility.

The application of scarifications is useful also in the pustular keratitis, which the Germans name scrofulous ophthalmia. If in a case where a pustule takes place near the centre of the cornea, and threatens to obstruct the field of vision by spreading over the pupil, the conjunctival vessels are cut in two or three places near the cornea, the inflammation ceases, the effusion between the lamellæ of the cornea is reabsorbed, and the transparency restored.

In internal ophthalmias, the bleeding or the scarifications, give still more immediate benefit.

In acute iritis, accompanied with the most intense pain, bleeding or scarification will arrest the inflammation for a time, and relieves the pain immediately. Sometimes it is a powerful means of cure, and sometimes it acts as a palliative, during which other remedies may be brought to act. I have seen cases of iritis in which general and local bleeding, opium and belladonna failing of effect, the *direct bleeding* has relieved the pain immediately. Under such circumstances this little operation certainly causes great pain, but this pain is rapid, and the patient demands a repetition of the operation as soon as the permanent pains return with their intensity. It is useless to add, that in such cases the direct bleeding is only an auxiliary, and that the general treatment ought to be pursued in all its rigour.

In the neuralgic forms of choroiditis which leave the patient no repose, and which are followed by glaucomatous degenerations, the section of a vessel in the proper place will relieve the pain immediately.

I have also tested the power of this means against pain in cancer of the eye. A young man suffering from encephaloid tumour of the retina still covered by the selerotic, was thrown into the most deplorable state by the intolerable pain which it caused. Not consenting to have the diseased organ extracted, I proposed *bleeding the eye*, which was accepted, the pain being instantly relieved upon section of a vessel. I practiced the operation upon him several times, always giving instant relief, until at last he submitted to extraction of the eye.—*Gazette des Hopitaux.*

MEDICAL PATHOLOGY AND THERAPEUTICS.

11. *Treatment of acute articular Rheumatism by veratrine.* By M. TROUSSEAU.

We have already spoken of this treatment, but consider it of so much importance as to refer to it again. One pill, we have said, containing the tenth of a grain of veratrine, is given the first day, two the second, three the third, increasing the dose one pill each day, and it is rarely necessary to go beyond six or seven. M. Trousseau, knowing the duties of physician and teacher, has not hesitated to experiment with this therapeutical agent before his numerous students; the results have been marvelous. A woman, aged 25 years, entered his wards with a general acute articular rheumatism of three days duration, complicated with endocarditis characterised by a souffle, to the first beat of the heart, extending itself into the calibre of the aorta, and into the arteries of the neck, plainly indicating a lesion of the aortic orifice. It was impossible to find a case more favourable for the therapeutic experiment on account of the extent and intensity of the complications. M. Trousseau gave a pill on Saturday; on Sunday there was already an amelioration of the symptoms, and he gave two pills. Monday, the fever, the inflammatory engorgement of the hands, &c., had almost disappeared: three pills were given. Tuesday, the day upon which M. Trousseau lectured upon the case, the health was perfect, except the condition of the heart. "A fact is but a fact," remarked the learned professor, "but I can hardly attribute this result to chance." Neither can we attribute it to chance, because we have seen M. Piédagnel employ this medicine with a success almost constant; and know many cases which prove its efficacy. The innocence, the insipidity, and the low price of veratrine, will make it, (if farther experience confirms the facts already noticed,) one of the most precious medicines which we possess. We must not pause upon so good a road. What is rheumatism, if not an inflammatory affection, associated with the rheumatismal diathesis? And on the other hand, in a number of cases, what is pleurisy, pneumonia itself, etc., if not inflammatory conditions produced by the same general influence, rheumatism? It is true that the erratic march of the inflammation establishes a sensible difference between acute articular rheumatism, and pleurisy, and pneumonia, but if the principle is the same is there not a reason for trying the same remedy. We reason with reference to the specific antirheumatismal power which veratrine seems to possess. But if this is not satisfactory it may be regarded in another sense, viz., as a powerful antiphlogistic or contra-stimulant, and as such veratrine would be indicated in a general manner against inflammation, since it has been seen in the space of three days, in the dose of six-tenths of a grain altogether, to reduce the pulse. Perhaps we are indulging in too great anticipations with regard to the results of experiments with veratrine, and it will be necessary, at least at first, to limit its application to inflammatory affections, allied to rheumatism; among which we include *pleurisy, pneumonia* and neuralgia. The aortic souffle persisted in M.

Trousseau's patient, but this is often the case with any treatment, and M. Piédagnel asserts that there is a notable diminution in the diseases of the heart consequent upon acute articular rheumatism when it is treated with this medicine.—*Gazette des Hopitaux.*

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12. *Inhalation of Chloroform in Pneumonia.*

The late journals of Germany publish more than 200 cases of pneumonia treated by inhalations of chloroform. Far from being contra-indicated in pulmonary phlegmasia, as had been thought up to the present time, chloroform on the contrary would seem, according to these facts, to modify favourably the inflammatory process of the lung. From among the observations published, out of 193 cases treated by Drs. Wachner, Baumgartner and Schmit, only nine died. Of twenty-three cases reported by Dr. Wawentrapp, of Frankfort, nineteen were treated exclusively by chloroform, and only one died. Every two or three hours the patient is made to inhale the vapour from fifty drops of chloroform, during ten or fifteen minutes, so as never to let the effects reach to a loss of consciousness. All the patients were of adult age, and the disease upon an average had reached the fifth day. In every case it was observed that the chloroform had a diaphoretic effect, which was sometimes produced by the first inhalation, and never failed to manifest itself on the third or fourth day. It gradually diminished the local pain, and caused it to disappear; it calmed the thoracic anxiety, brought back the respiration to its normal type, always appeased the cough, facilitated the expectoration in rendering it less abundant; and, lastly, it reduced the febrile reaction and induced a refreshing sleep three or four days after the inhalations were commenced.—*Gazette des Hopitaux.*

OBSTETRICS, &c.

13. *Gastro-Hysterotomy performed successfully for the mother and child.* By VAN AERSCHODT.

The double success which has attended this operation, which was performed in the country, with assistants whose awkwardness compromised the manœuvre, is another proof in favour of the idea, which has already gained ground, that the elements of a complete statistical record in regard to this procedure, is to be sought elsewhere than among the surgeons of great hospitals.

CASE.—A woman aged 25, deformed by rachitis, with a sacro-pubic diameter of less than two inches, was much exhausted by a fatiguing labour of more than thirty-six hours, which did not cause the head of the child to advance. It was decided in consultation, that after so prolonged and fruitless an expectation, the cæsarian operation was only appropriate resource.

Accordingly H. Van Aerschodt made an incision along the m[illegible] line, grazing the border of the rectus muscle. After the division of the abdominal walls the assistant who supported the intestines allowed them to escape. They were removed from the wound with difficulty, and a better co-operation on his part was requested. The uterus was then incised, fortunately in a part to which the placenta was not attached. The back of the child presented. The surgeon immediately extracted a strong, vigorous infant, whose cries impressed the mother with such delight that she seemed to be fully rewarded for her sufferings.

Three points of twisted suture, and strips of adhesive plaster established the reunion of the abdominal wound.

The results of the operation were very simple, and now there is no draw-back to the happiness of this woman, who felicitates herself upon being a mother, even at the price of such a sacrifice.—*Annals of the Med. Soc. of Antwerp*—(*Gazette Médicale de Paris.*)

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14. *Of the induction of premature Labour, in the obstinate Vomiting of pregnant Women.* By M. CAZEAUX.

[*At a late meeting of the Société de Médecine de Paris.*]

M. Cazeaux referred to a case of obstinate vomiting which appeared to yield under the employment of the extract of belladonna, applied to the neck of the uterus, which he had reported to the society some months ago. A short time since he had had occasion to observe a similar but less fortunate case. M. Trousseau had called him to attend a young woman, two months and a half advanced in pregnancy, who literally vomited everything which she took into her stomach. She suffered from epigastric spasms with complete privation of sleep, with fever and emaciation. Nevertheless the appearance of the woman was tolerably good, and M. Cazeaux tried the belladonna, but without the least benefit. M. Trousseau then called in consultation MM. Dubois, Monnier, Andral and Cazeaux. The first day it was determined, on the proposition of M. Andral, to employ opium. The medicine was without effect. M. Cazeaux added that it augmented the vomiting. It then occurred to M. Trousseau to administer pills of meat, which he had prepared by Mialhe. The patient continued to vomit however, though she retained ten or twelve of the pills.

At the second consultation abortion was proposed. M. Cazeaux alone opposed this proposition. Notwithstanding his objections abortion was decided on; he retired.

The operation was attempted by M. Paul Dubois, and did not succeed for three days. After the abortion the vomiting ceased, but the fever persisted, and the other phenomena augmented. In a few days rheumatismal pains occurred in the shoulders, and afterwards numerous abscesses in the same region. In short the woman died fifteen days after the abortion. No autopsy was allowed.

M. Cazeaux considered the abscesses the result of a uterine phlebitis. He remarked that this was a seventh case of insuccess to be added to those already known to science. Hitherto there has been only one fortunate case in eight. He concluded therefore that the expectant *plan was preferable* to an operation.

M. Jacquemin had lately observed a case of obstinate vomiting in a young primiparous woman, four months advanced in pregnancy, residing in Hâvre. The physicians of that locality tried ineffectually the means recommended in such cases. The patient came to Paris and was placed under the care of M. Jacquemin. He employed without success, enema of laudanum, and blisters dressed with morphia to the epigastrum. She was in a very grave condition: beside the vomiting, the intellectual faculties were perverted. M. Jacquemin thought of proposing abortion, but he wished first to have the opinion of M. Moreau. As this young woman was in the habit of drinking brandy and cologne water, the consultation decided to try first champagne wine; the patient drank three glasses of it daily; the vomiting ceased from that moment.

Like M. Cazeaux, M. Jacquemin had observed that opium augmented the vomiting.

M. Cazeaux observed that this case was the more interesting because the patient of M. Jacquemin had arrived at the third stage of that affection which, according to an aphorism, inevitably involves the death of the patient. M. Rayer has been understood to say that he has cured two cases of obstinate vomiting by sherry wine. It is certain that the preparations of alcohol have succeeded in these cases beyond all hope.

M. Loir had observed a case similar to those of MM. Cazeaux and Jacquemin. The anti-phlogistic method was used, and the patient succumbed at the end of two months.—*Revue Médicale de Cayol.*

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIONS.

15. *Of the treatment of Ovarian Cysts by Iodine Injections.* By Dr. Duplay, Physician to the Hospital for Incurables, Paris.

Experience has long since shown the worthlessness of the medical means employed for the radical cure of fibroserous cysts of the ovary. Mild and drastic purgatives, diuretics in large doses, sudorifics, issues and derivatives, tried one after the other, have testified to the impotence of art, and have often more or less compromised the safety of the patients.

As to the surgical methods practiced until now, experience has demonstrated that the greater number are insufficient, such as tapping, acupuncture, and compression; or else too dangerous, as extirpation or permanent puncture, that is to say, the establishment of a fistulous orifice giving a continual issue to the liquid contained in the cyst.

Irritating injections of liquid or gas are not more reliable or innocent, if we judge by the results of attempts of this sort. M. Jobert, (de Lamballe,) it is true, has on one occasion successfully performed

an alcoholic injection of an ovarian cyst. M. Holscher* has also published a case of cure following an injection of wine; but in opposition to these fortunate cases, Lizars† cites the case of a woman treated by Scudamore by means of port wine injections who died in a fortnight; and Denman reports a case similarly treated which terminated fatally in six days.

Injections of iodine for the radical cure of ovarian dropsy appear to have escaped the opprobrium justly awarded to the other surgical methods advised, and to injections with other irritating liquids. Introduced twenty years ago in the treatment of a great number of surgical diseases, the list of which has continually augmented, injections of iodine have been followed by the happiest results in cases of simple or encysted hydrocele, in hæmatocele, in serous accumulations in subcutaneous closed cavities, or the large joints; in cold abscesses, or in abscesses by congestion; and, lastly, in ascites.‡ The great success achieved by this mode of treatment, its harmlessness in the less fortunate cases, justify beforehand its application for the cure of encysted ovarian dropsy. Nevertheless it is only recently that essays of this sort have become at all common. Already, in 1844, M. Marchal (de Calvi) had mentioned in a thesis§ an operation of this character successfully performed by M. Ricord. A little later (August 1849) Dr. Allison published in the *Journal des Connaissances Medico-Chirurgicales* a second case successfully treated by the same method.‖ In 1850 Dr. Thomas reported, in an excellent thesis for the doctorate, three cases of cure which he had observed in the service of M. Robert. Still more recently M. Boinet has published (*Bull. de Thérapeutique*, August 30th, 1852,) an interesting memoir upon the radical cure of ovarian dropsy by iodine injections. The author, after describing in detail this plan of treatment, cites two cases in which it was successful. Lastly, M. Rossignol has recorded (*l' Union Médicale*, September 11th, 1852) another successful case treated at the Hospital Saint Lazare, in the service of M. Boys de Loury. While these results were published in the medical journals, M. Monod repeatedly practiced the same operation, and almost always with success; and at the same time he extended the use of iodine injections to the radical cure of many other affections.

In the present state of the question, as there may be a doubt in some minds as to the utility, or at the very least, as to the harmlessness of this method of treatment, we believe that it is well to make known all of the cases in which it has been practiced; therefore we consider it in some measure our duty to make known the following case:

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* *Archives générales de Médecine.* 3e serie. 1838.

† *Observations on diseased ovaria.* Edinburgh. 1825.

‡ [We may add that Velpeau has employed injections of iodine in Spina Bifida, and has succeeded in obtaining obliteration of the sac, and in apparently postponing the fatal termination of the disease.—Ed.]

§ *Thèse de concours pour l'agrégation*, 1844.

‖ [Dr. Allison of Spencer, Indiana. The case was first published in the *Medical Examiner*, N. S. iii., 459.—Ed.]

Encysted ovarian dropsy; evacuation of four gallons of liquid by puncture; injection of iodine—Cure.—Madame G———, aged 65, of middling stature, of sanguine temperament, and never having borne children, ceased to menstruate during the year 1835. She was attacked at that period by a malady which confined her to her bed for a long period, but the nature of which it is difficult to understand from the incomplete history she gives of it. Shortly after her convalescence she perceived dull pains in the left side of the hypogastric region, where a tumour soon manifested itself. At the same time the leg and thigh of the corresponding side became the seat of a swelling, which gradually diminished and disappeared. The tumour slowly increased, occupying the whole hypogastric, and afterwards the umbilical region. The physician who attended Madame G——— at this time prescribed divers internal and external remedies, which failed to arrest the growth of the tumour; he then advised her to abandon all treatment until the tumour should acquire such a bulk as to render an operation necessary.

I saw the patient, for the first time, in the year 1849. The abdomen was then more voluminous than that of a pregnant woman at full term: it was uniformly distended, and a collection of liquid was easily recognised by the very evident fluctuation. The intestines were forced to the right superior and posterior portion of the abdominal cavity; for there alone percussion gave a clear sound: the rest of the abdomen was absolutely flat, whatever position the patient assumed. From the progress of the symptoms, and from the position occupied by the intestines, on the opposite side to that on which the disease had originated, it was easy to recognise an encysted dropsy of the ovary.

The respiration being impeded, and walking very painful, and the general health, on the other hand, being excellent, I proposed to perform paracentesis as the only means of curing or, at any rate, of palliating the disease; but the patient recoiled at the idea of an operation.

I lost sight of Madame G——— for nearly two years; she passed the fine season in the country and the winter in Paris. During the autumn of 1851 she was treated by an empiric, who promised to cure by drastic purgatives. These violent remedies undermined the health of the patient without influencing the disease. Madame G——— had the good sense to suspend the treatment, without waiting for the consummation of the cure.

I saw this lady again in January 1852. Her general health was deteriorated, her digestion difficult, her respiration oppressed; she earnestly demanded relief, even by an operation.

I called M. Monod in consultation, and we decided to evacuate the cyst, and afterwards, unless something contra-indicated the operation, to inject iodine, notwithstanding the extent of the surface which would be thereby inflamed.

The second of February four gallons of clear fluid were evacuated by the trocar. We explored the abdomen attentively, but could discover no engorgement or induration of the cyst. Nothing, therefore, opposing our design, we forced into the cavity, by means of the canula, eight ounces of iodine injection of Guibourt, (water 100 parts; alcohol 50; iodine 5; iodide of potassium 5.) The injection having been made, the abdomen was kneaded, in order to bring the irritating liquid in contact with the whole internal surface of the cyst. Neither the injection or the kneading of the abdomen caused the slightest pain. By pressure and the aid of the syringe the whole of the injected fluid was removed. The abdomen was immediately covered with twelve layers of cotton batting, and compressed by a tight bandage. Diluent drinks were ordered, with one fifth grain of extract of opium every hour.

For a few days there was considerable febrile reaction, the abdomen was sensitive upon pressure, slightly tympanitic; the bowels were constipated; the urine *tolerably copious, turbid,* containing traces of iodine. On the 6th

of February, four days after the operation, the patient was nearly well, and from this time her convalescence was rapid.

I have since seen her several times. Her health has daily improved, and the most careful examination of the abdomen fails to discover any return of the disease.

Perhaps it may not be uninteresting to recur to some of the circumstances attending this case, and also to compare it with the analogous cases which have been made public.

The age of the patient, and the long period which had elapsed since the commencement of the disease, are two circumstances worthy of attention. All of the patients upon whom this method has been heretofore employed, were younger. Dr. Allison's patient was 21; the first of M. Robert's patients was 17, the second 44, and the third 55; in the cases published by M. Boinet, the age of one patient was 54, of the other 60 years.

In respect to the size of the cyst, we find that the other cases, treated by this method, presented, with one exception, a much less considerable development of the disease, than existed in our patient. In the three cases observed by Dr. Thomas, the cyst contained two quarts of serosity in the first, three in the second, and ten in the third. The quantity of liquid was four and a half pints in the case on which M. Boys de Loury operated. In our patient over four gallons of serum was evacuated, but this large quantity is surpassed by the second case reported by M. Boinet, in which the serous accumulation reached the enormous quantity of 22 quarts of liquid. These two facts seem to demonstrate that the operation is not counter-indicated by the extent of surface upon which the injection will act; for in the one instance the slight symptoms which supervened disappeared rapidly of themselves, and in the other frictions of mercurial ointment sufficed to dissipate them. As to the nature of the liquid contained in the cyst, in our patient it was favorable, for, as Professor Velpeau observes, the nearer the fluid of a cyst approaches to serum, the easier it is to obtain adhesive inflammation in its walls. Nevertheless we may remark that fortunate results have occurred when the cyst contained liquid of a very different nature. Thus in one of the cases reported by Dr. Thomas, it was thick, and of the colour of chocolate; it was purulent in another, and, in a third, reddish, stringy, containing a great proportion of albumen, and a certain quantity of cholesterine.

The circumstances in which iodine injections have been practiced, have varied. In Dr. Allison's case, a large opening was made in the cyst, and a tent of lint introduced in order that the contents might be freely discharged; the injection was not made until later, when the liquid had become purulent, and hectic fever had come on. In the three cases reported by Dr. Thomas, the injection was not practiced until paracentesis had failed repeatedly, and, in one case, not until the discharge had become purulent, and symptoms of purulent absorption had appeared. M. Boinet had recourse to the iodine injections three months after a first puncture had been ineffectually tried. In our case the injection followed immediately after the first evacuation of the cyst. The same procedure was adopted in the remainder of the cases *which have* been reported. Does not this method give the patient the *greatest hope* of recovery? Is it not evident, in fact, that when the

walls of the cyst have never been inflamed, there is a better chance of determining adhesive inflammation? If on the contrary we wait until, after successive punctures, the walls have become thickened, and their internal surface covered with false membranes, is it not probable that iodine injections will be insufficient to cause adhesion? Observation confirms this supposition, for in examining the patients treated by the two methods, we find that in Dr. Allison's case a fistulous opening existed for two years after the operation. In the three cases of M. Robert, a fistula persisted in each for several months; and in one of the cases reported by M. Boinet, in which the iodine injection was used after repeated punctures, he was compelled to leave a sound in the cyst, to have recourse to the injection several times, and the cure was not complete for ten months. On the other hand, in the first case of M. Boinet, in which iodine was injected as soon as the cyst was evacuated, the patient recovered immediately, and without a fistula, although she was almost moribund, and the tumour contained 22 quarts of liquid. The patient of M. Boys de Loury was perfectly cured in two months; and our patient was well in fifteen days. We regret that we cannot establish a parallel between a greater number of facts; but we think that those which we have been able to collect, are strongly in favour of injections made immediately after the first puncture of the tumour.

As to the phenomena which accompanied the operation, we remark how little pain was provoked by the iodine injection. The same peculiarity was observed in the other cases. On the contrary, other irritant liquids have caused extreme pain, as any one may be convinced, by reading the account of the alcoholic injection practiced by M. Jobert (de Lamballe).

A not less remarkable peculiarity consists in the absence of febrile reaction, or of any general symptoms of an alarming nature. This has been noted in all of the cases hitherto published. Let us hear M. Boinet, who has frequently employed iodine injections:

"The women subjected to this operation have more or less fever; sometimes nausea supervenes, or symptoms of slight peritonitis; there is sleeplessness, and nervous agitation, the skin is hot, the abdomen more or less sensitive, especially in the region of the cyst; but all of these symptoms, habitually slight, yield readily to repose, cataplasms with laudanum, or mercurial ointment, and disappear completely in the first twenty-four hours; it is rarely that they continue for two or three days."

The dangers to which patients affected with encysted, ovarian dropsy, are exposed by iodine injections are not serious, therefore, especially when compared with the other surgical methods advised in this disease. Therefore we believe, in a malady as grave as this, which sooner or later must lead to death, we should not be deterred from employing this new method, and giving the patient this new chance of safety.—*Archives Générales*, March 1853.

EDITORIAL AND MISCELLANEOUS.

REGISTRATION OF MARRIAGES, BIRTHS AND DEATHS.

We understand that the measure proposed to the legislature two years ago, by the Medical Society of Virginia, relative to the registration of Marriages, Births and Deaths, was passed just before the adjournment of the General Assembly, and will therefore be a law of the Commonwealth after the first of next July. We shall take an early opportunity of publishing the bill at length for the information of the profession.

The necessity of statistics of the population for the elucidation of truths affecting the welfare of mankind, is universally acknowledged, and we rejoice to see this first step towards the accumulation of materials for future labourers in the field of Public Hygiene.

It seems a difficult matter to convince our legislators that the lives and physical well being of the community, as well as its pecuniary interests, deserve consideration; and, nevertheless, nothing is more true than that the prosperity of a country is directly proportional to the corporeal vigour and health of its labouring population; and that a wise government will earnestly investigate and remove, when possible, every cause which may exert a deleterious influence upon the health of the masses.

We hear the governments of Europe denounced as remorseless despotisms, regardless of the happiness of the people, still they do something to ameliorate the physical condition of their subjects. London, Paris, and the chief cities of the continent abound in Public Baths and Wash-houses, many of which are free, while others are open to the poor at prices varying from three to five cents. In all of the large European cities, model lodging houses are springing up, under the auspices of the governments, to provide well ventilated and comfortable abodes for the lower classes. The vast pile of buildings in Paris called "cité Napoléon" may be taken as an example of these establishments. This structure encloses a quadrangular court, occupied by a fountain, in an elevated and airy locality. It is already occupied by 250 inmates, and 500 will be accommodated when the remaining buildings are completed. The lodgings are rented at prices varying from *twelve to thirty-six* dollars per annum; for the larger sum the labourer

is entitled to two rooms and a closet for cooking. Baths, laundries, and a free dispensary are attached to the establishment. Notwithstanding this moderate rent, the revenue is equal to the interest of the capital invested.

There is no mechanical art, the pursuit of which involves a sacrifice of health, which escapes the vigilance of the public authorities. Men of science are employed to discover means to diminish as much as possible its noxious influence, or to propose harmless materials which may be substituted for the deleterious substances used by the artizan. At this very time a commission of the Council of Health of the department of the Seine, composed of Magendie, Chevreul, Legentil, and others eminent in science or the industrial arts, are engaged in determining the practicability of the substitution of zinc paint for the poisonous white lead now universally employed with such disastrous effects.

The police inspect with care the markets; the deposits of grain; the bread assize; the cleansing of the streets, sewers, &c.; all noisome establishments, such as breweries, chemical manufactories and cemeteries. The heaviest penalties are inflicted on those found guilty of adulterating drugs; the closest restrictions prevent the sale of poisons and deleterious agents.

Vaccination is rendered obligatory in Italy and the South of Europe, and the governments of France and England are now discussing the propriety of a similar law. The highest medical authorities are paid to furnish advice to the government on questions relating to epidemics, quarantines, and public hygiene in general. Asylums for the Insane; the Blind; the Deaf and Dumb; the Aged and Infirm, are everywhere in abundance. London alone, with its population of three millions, contains thirteen general hospitals, with a collective staff of one hundred and fifty physicians and surgeons, which render relief to three hundred thousand patients annually. The Royal Hospital of St. Bartholomew alone, succouring nearly five thousand in-patients and eighty thousand out-patients every year. And this vast system of relief, and the immense amount of medical and surgical skill consumed in its bestowal, are almost—the latter entirely—gratuitous.

The subject of medical education is jealously cared for. The medical schools are generally of the highest order. Few leave them whose minds have not been refined and elevated by liberal studies; and yet their graduates undergo a rigid examination by public teachers before they receive a license to practice medicine.

Thus, then, we have briefly stated a few of the mea[illegible] by European *governments to preserve* the health of the [illegible]

provide proper counsel and relief for those who become sick. It is painful to enquire what has been done in our country; still more so to ask what has been done in Virginia. As regards sanitary police regulations, we have absolutely none. Diseased meat is daily sold in New York; cesspools and filthy sewers fill the air of all of our large cities with noxious effluvia; intramural interments are practiced; and every kind of manufacture, injurious to the public health, is freely sanctioned. In regard to drugs, the falsifications which they undergo are notorious. The Government of the United States has wisely appointed an officer, whose business it is to inspect all imported drugs, so that the Importer and Wholesale Dealer are protected from frauds, but to show the imposition practiced on the Retailer and Consumer, we will quote some extracts from an article by Dr. Willard of New York, in the January number of the *Edinburgh Medical and Surgical Journal:*

"We do not wish to make wholesale charges; but we cannot doubt the fact, that there is no traffic which opens so wide a door for fraud, imposition, and iniquity, as the trade in drugs, and the manufacture of chemicals and pharmaceutical compounds. And it is not alone in the more costly preparations of this sort, that fraud and imposition exist. Even the cheapest are not only adulterated, but sometimes an article of the kind is found which contains not one particle of the substance which it purports to be. For instance, we have now in our possession a specimen purchased for precipitated carbonate of iron which was nicely bottled up and labelled with what purported to be the manufacturer's name, which consists entirely of Spanish brown. Another article was purchased for litharge, which it is believed contained no particle of lead, but seemed to consist entirely of some yellow earthy substance, such as yellow ochre, or some other cheap material of the kind. Most practitioners in the country are in the habit of preparing their own tincture of muriate of iron. That which is purchased from the apothecary is so variable in its strength, that it is not to be depended on; and, indeed, that which they prepare for themselves is little better, in consequence of the very great impurity of the precipitated carbonate, which is generally used in its manufacture. We have seldom been able to dissolve more than one-half or two-thirds of the iron, and of course the preparation varies in strength in proportion to the amounr of iron it contains.

"Sweet spirits of nitre is an article, which it is extremely difficult to find in the country of equal and uniform strength. It is manufactured either by the chemist or the drug-seller (we do not exactly know which) of all sorts of strength, to suit purchasers, and hence it comes to us labelled with a multitude of F's, from a round half-dozen or so, which are supposed to indicate the different degrees of strength, down to that which is not considered worthy of being dignified with any F at all. This last is the prep*aration which is* most usually brought into the country, and it not unfre-

quently requires an individual of a most exquisite nicety of taste and smell to distinguish it from ordinary whisky. Precisely the same remarks will apply to aqua ammoniæ. Perhaps there are scarcely two samples of this article which contain the same amount of ammoniacal gas, so that, in ordering it for internal exhibition, the prescriber never knows the exact amount of the alkali he directs.

"The compounded spirits of lavender is a preparation which perhaps never comes to us in the shape in which it is directed to be made by the Dispensatories. The various writers on pharmacy state that it is a delightful compound—an elegant preparation—a grateful cordial; but we, at least, have never been able to procure it in so delightful, elegant, and grateful a form. On the contrary, that which we have usually procured, exhales anything but the delightful and pleasant aroma of fresh lavender and rosemary. We are led to believe, that it is now generally, if not always made by dissolving the essential oils of lavender, rosemary and cloves in alcohol, in very variable quantities, to suit the notions of the compounder, and colouring the mixture with red sanders. If fresh oils were used, this might be a very tolerable substitute for the officinal preparation, always providing the oils were pure. The oil of lavender ordinarily used by the apothecary is probably procured from the broad-leaved variety of the plant, instead of the narrow-leaved, which is more costly as well as more fragrant. The former variety smells pretty strongly of turpentine, and both are not unfrequently pretty largely adulterated with it, so that, in the compound we are considering, we get a most villanous essence of turpentine instead of lavender.

"We frquently get Croton-oil in the country which will not even produce redness of the skin. It is needless to say that some cheap oil is mixed with it.

"It is perhaps useless for us to speak of the very extensive adulterations of those medicines which come to us in the form of powders. Their inefficiency is well known. Among these ipecacuanha, rhubarb, and jalap are frequently so diluted by the addition of inert substances, that it is difficult to designate a proper dose; and many times, an amount is required that is extremely inconvenient to the patient, and not a little annoying to the prescriber.

"That there are more bad drugs in the country than heretofore is perhaps not the fact; but that the quantity is materially lessened, is very much to be doubted. The reason, or at least one reason, for this is, that in the country but very few in proportion to the whole number that sell drugs, know anything at all about the trade; many not being able, indeed, to distinguish one drug from another, except by the label on the package. We have known Peruvian bark sold for rhubarb, *uva ursi* for buchu, and Virginia snake root for pink root. The object of the country trader is very much the same as that of the merchant princes, that is, to make money, and whatever purchases they make, are made with a single eye to the expected profits, and whatever will afford a profit is considered a legitimate article for

traffic. Hence a country store is a sort of "*omnium gatherum*," the contents of which would put entirely in the shade the multifarious catalogue of the famous Mr. Caleb Quotem.

"Hence it will be seen that the country is flooded with impure and adulterated articles, in consequence of ignorance of the quality on the one hand, and insatiable cupidity and recklessness of human life on the other."

It is alleged by many that the sanitary regulations to which we have alluded, are unnecessary here; that with our limited population, epidemics are uncommon, and industrial pursuits calculated to produce disease, few in number; and that the public health may be left to take care of itself. We cannot admit the force of this argument. We have seen in this city, alleys and rows of houses whose filth and squalid wretchedness could not be surpassed anywhere; we have entered close and over-crowded rooms as pregnant with disease as the apartment which Dr. Ferrier visited to bring relief to the poor victim of fever, and thrust his cane through the window, thus typifying a whole category of sanitary evils and sanitary remedies; we have just witnessed an epidemic of pneumonia, in which the mortality was nearly as great as during the last visitation of cholera, and it was the opinion of those who had the largest opportunities for observation, that the typhoid character of the disease was due, in many cases, to the noxious, ill-ventilated abodes of the patients. This character in the disease was so striking in the case of "factory negroes" supplied with "board money," which they squandered and lived where they could, that some physicians were convinced that a radical difference existed between the white and negro constitution, rather than a difference of physical condition in the two classes.

Therefore we believe that it is high time that the authorities moved in this matter, and devoted their attention to efficient sanitary reforms.

The report of the proceedings of the Medico-Chirurgical Society of Richmond, which is published in another part of the Journal, proves that ultraism is quite as much the besetting sin of our little world as of the medical world at large. The very creditable essay by Dr. Gibson on diseases of the neck of the womb, which gave rise to the discussion, is free from this fault it is true; its fault, if any, is that of omission, in devoting too little attention to the general and constitutional treatment necessary in such cases; but the discussion was ultra in the highest degree. We are willing to make due allowance for the *inexperience* of some of the speakers in debate; we know them to be *much better* physicians than orators; and we are not disposed to hold

them responsible for all they said. Indeed, an intimacy with some of them enables us positively to assert that they advanced opinions directly at variance with their practice in cases calling for their deliberate judgment.

The talent, zeal and industry which have been devoted to this subject in Europe and this country, during the past few years, have produced results which render this ultraism more amusing than dangerous, for even the distinguished names of Bennett on the one hand, and Lee on the other, are not sufficient to make it pass current in practice. Amongst all the speakers on this occasion, we venture to say that on the principal point in debate—the use of the speculum and local treatment by caustic—there is no difference in practice except as to the degree to which, and the particular cases in which, the treatment may be resorted to. They are all too well informed to resort in all cases to either local or general treatment solely and exclusively. There is not one of them who has not used, and would not again use, the local treatment with the assistance of the speculum in certain cases. This proves every thing as to the philosophy of the treatment. The extent to which it can be brought to be resorted to, the particular cases in which it may with propriety be advised, must be left to the judgment and gentlemanly feelings of the practitioner. That it will be employed in many cases by fools unnecessarily, and by knaves nefariously, is to be deplored, and may well make us all in the highest degree circumspect in its use, but is no argument against the remedy itself. The same reasoning would deprive us of calomel, opium, and many other of the most approved means which we have of alleviating the sufferings of our fellow beings. C.

We observe that the editor of the "Stethoscope" has been assailed, in the public prints, for fulfilling his duty by exposing an itinerant Quack, who has recently lectured in this city, and practiced on the credulity of weak-minded people. Our cotemporary deserves the thanks of his professional brethren for boldly denouncing an individual who has attempted to bring them and their science into contempt, and for administering a severe rebuke to those thoughtless persons, who, by presenting him with testimonials, have gratified this charlatan's cupidity and increased his ability to do mischief. Our cotemporary is no doubt glad to find, by this outburst, that his strictures have had some effect, and will care very little for the anonymous abuse of which he is the object.

HONOURS TO AMERICAN SURGEONS.

On the 22d of February the Academy of Medicine of Paris heard the report of the commission appointed to nominate candidates for foreign associate membership, and proceeded to elect the seven following savants to receive this honour: VALENTINE MOTT, of New York, 73 votes; BUFFALINI, of Florence, 71; WARREN, of Boston, 64; RIBERI, of Turin, 63; VLEMINCKX, of Brussels, 49; RETZIUS, of Stockholm, 45; SIMPSON, of Edinburgh, 24.

The other candidates were: OWEN, FARADAY and BRIGHT of London; BREWSTER of Edinburgh; MARSH of Dublin; GRANDET of Lisbon; CHELIUS, of Heidelberg; EHRENBERG and CASPER, of Berlin; BETTI, of Florence; DE RENZI, of Naples; BARONI, of Rome; BISCHOFF, of Giessen; ARNOLD, of Fribourgh; AUVERT, of St. Petersburg; ROKITANSKI, of Vienna. The number of foreign associates is limited to 32.

The following remarks from the pen of Amédée Latour (*l'Union Médicale*, 5 Mars) may be interesting as exhibiting the opinion of our countrymen entertained abroad:

"Has the academy made the best choice? In that brilliant constellation of illustrious names it is temerity to hazard a classification. How, when so many important elements are wanting, can we attempt a comparative appreciation? The star which we class of such or such a magnitude, on account of its remoteness, may be a resplendent sun which illuminates a world. Scientific celebrity depends, moreover, more than is thought, upon certain local circumstances. To attain eminence in London or Berlin, other qualities are required than at Pisa or Florence. Dupuytren, with his cold, calm voice, his sober gesture, and gravity of demeanour, would not have succeeded, probably, at Naples, in the land of imagination and poetry. But we will not dwell on this subject; it will be better to pass rapidly in review those celebrated names which the academy has associated with its glory.

"Valentine Mott, who was placed the fifth on the list of seven, presented by the commission, has had the honour of being elected the first, and almost with unanimity. His is one of the greatest surgical reputations of the epoch. Mott personifies, in surgery, the American genius; bold, adventurous, audacious even, but persevering and active until his efforts are crowned with success. The history of contemporaneous surgery is filled with the exploits of this eminent operator. His compatriots assert that he shoud be judged less in his writings than at the bed-side, and in the operating amphitheatre. He is a surgeon of inspiration and action, rather than a *didactic professor*. His spirit rises and his mind is rendered more acute by

difficulties and novelties. He forgets or disdains precepts and rules, and yields without hesitation to the impulses of the occasion or of the moment. Mott enjoys in both worlds one of the best established reputations.

"Buffalini, of Florence, now wields the sceptre of medicine in Italy. He has had the honour of destroying, upon its own altars, the creed of contra-stimulism. The eminent professor of Florence may be called a moderate *organicien;* he is more inclined towards the anatomical school than is fashionable at Montpellier; he is more of a vitalist than is fashionable at Paris. He understands and skillfuly avails himself of all the modern procedures in diagnosis; but it is not merely anatomical diagnosis which is his exclusive theme in his learned clinical lessons. An eminent professor, his writings are perhaps inferior to his teaching. 'His criticisms are more valuable than his assertions,' said M. Combes, who had the honour of seeing and hearing Buffalini at Florence. It is in fact less by the creation and promulgation of new ideas, than by a powerful criticism, that Buffalini has reached the high position which he occupies in Italy.

"Warren, of Boston, has been thus characterized by the commission: 'This is one of those master-minds to which nothing in science is entirely unknown. With his indefatigable activity Warren has treated, and always, if not with superiority, at least in an instructive manner, a multitude of subjects in anatomy, physiology, natural history, surgery and practice. His name is inseparable from the discovery of etherization; the effects of which in a capital surgical operation he was the first to determine.' Warren has also displayed the same generous devotion to science which Orfila has recently exhibited in such an admirable manner. He has presented to Harvard University a Museum valued at ten thousand dollars, and has added a gift of five thousand dollars in money.

"The reputation of M. Riberi, of Turin, is immense, and he possesses the universal esteem of the medical profession. He is an eminent professor and a practitioner of the first order. Though a skilful generalizer rather than an inventor, Riberi deserves the credit of many important modifications of surgical methods and procedures. His refinement of mind and manners, his character as an instructor, and the high scientific position which he occupies, have made him the choice of the government of his country for the office of Senator.

"Vleminckx, of Brussels, is," says M. Jules Guérin, "of an intellect and reputation quite the opposite of Mott. The one owes his superiority to the inspiration of the moment, the other to deep reflection and intellectual labour. Vleminckx is a man of profound meditation, of elevated conception, of a well-balanced organization. This kind of excellence does not strike the vulgar crowd, but it surrounds the possessor with the esteem and admiration of his equals. Such is Vleminckx, the annually re-elected president of the Academy of Medicine of Belgium; Inspector and Director-general of the Medical Staff of the Belgian army; a man, says M. Bégin, whose absence creates a void in the composition of a great, official, learned society.

"Vleminckx has studied with perseverance and success the opthalmia of the Belgian army, and it is to his efforts that the extinction of this cruel epidemic are due. All Europe is acquainted with the admirable organization of the medical department of the Belgian army, and the system of sanitary police adopted in that country, to prevent the propagation of syphilis. Vleminckx's name is intimately connected with these important reforms.

"Retzius, of Stockholm, is one of the most eminent practitioners of Sweden. The art of midwifery, especially, is indebted to him for important works. He is a physician of exact science, and his publications are considered high authority. Retzius holds a high position in Sweden. He is first physician to the Hospital and the Lying-in Charity.

"Simpson, of Edinburgh, is indebted to chloroform for the popularity of his name. Practical medicine and the science of obstetrics, however, owe to him works of great merit. Indefatigable in practice, as well as in study, he still contributes largely to the greater number of the British periodicals."

BIBLIOGRAPHICAL RECORD.

1. *Atlas of Pathological Histology.* By Dr. Gottlieb Gluge, Professor of Physiology and Pathological Anatomy in the University of Bruxelles, &c. Translated from the German by Joseph Leidy, M. D., Pathologist to St. Joseph's Hospital, Philadelphia, &c.; with three hundred and twenty figures, plain and coloured, in twelve copperplate engravings. Philadelphia: Blanchard & Lea. 1853.

It is with pleasure we welcome the appearance of such a work as this in our own language. The subject of which it treats is one of practical importance to every medical man, and we are glad to see that, in the main, it is handled by its distinguished author in a practical manner. In this work we see the practical results of the study of physiological histology which has been pursued so zealously for the last few years. It is only by ascertaining the normal elementary constituents of organs and their mode of development that we arrive at any accurate knowledge of their anatomy; and so also it is only by investigating the changes which the elementary constituents undergo, that we can arrive at an accurate knowledge of their pathology. We do not wish to be understood as saying that for the successful treatment of all forms of disease, the changes which occur in the constituents of the diseased organs should be accurately known; but we do mean to say, that until we have acquired such knowledge our treat*ment of disease,* whether successful or not, must be empirical.

Such is the knowledge—the changes which take place in the elementary constituents of the human body in disease—with which the work under consideration endeavours in part to supply us; and we welcome it as a step towards the approach of our science to the position of an exact science.

In the Introduction to the work the author presents a number of tables giving the magnitude and weight of the organs of man in the normal and abnormal conditions. These tables are prepared apparently with great care and exhibit vast industry and careful observation. They will be very useful to Anatomists and Pathologists as tables of reference.

In the first section, which treats of the development of the elements of tissues, the (pathological) elements of tissues are classified under two heads, homologous and heterologous, the latter embracing six varieties. The development of cells in the exuded plasma of capillary vessels, the parallelism between the pathological and physiological development of cells, the artificial formation of cells, and the development of fibres, are there clearly described. In the conclusion of this section, the author indulges in some strictures upon the irrational application of the cell theory of Schwann, which appear to us very just, and points out the true office of cells in the formation of tissues. He says,

"Cells appear to assume the part of a chemical apparatus in which the materials of the tissues are prepared, and they either become immediately converted into the latter—as cartilage cells into bone corpuscles, and bone laminae, or fibres, epidermal cells into corneous structure, &c.—or, where their function is to be a permanent one, remain in their original condition—as in glandular structures."

"As the result of the above remarks, the following law of the development of morbid tissues may be proposed: Many pathological structures originate through previous cell-formation in a double form. The production of the cells, in such cases, occurs according to the first mode, as discovered by Schwann. All tissues, however, cannot be proved to originate necessarily, and immediately from cells, and several we know certainly are not formed from them."

The second section describes the elements of the tissues combined in perfect or imperfect tissues and arranged according to the processes of disease. The tissues and elements of tissues in an imperfect condition of development are arranged in two classes: 1st. Those in which proteine predominates. 2d. Those in which carbon predominates. Next are pointed out the transitive forms to perfect tissues; and lastly perfect tissues. In describing these last we have two instances mentioned of the development of striated muscular fibre independently of the muscular system, one mentioned by the author, observed by Rokitansky in a tumour of the testicle, the other mentioned by the translator, observed by Virchow in a tumour of the ovary.

The third section, treating of the formation of the blastema, embracing the consideration of the subjects of nutrition, secretion and inflammation, with its terminations, will be read with a great deal of interest. We regret that our limits will not allow more than a glance at the chief points which the author makes upon these subjects. His pathology of inflamma-

tion is simple, and we think just; and, if generally adopted by pathologists, would avoid a vast deal of the confusion which now involves this subject. If nutrition (by which the vascular system of each organ separates the necessary elements) becomes abnormal, there exudes from the blood-vessels a liquid resembling serum, as in dropsy, or only single elements may exude, as fat in stearosis. In other cases, albumen and fibrine are effused, producing hypertrophy in various forms of tumours.

"In a final case, the blood stagnates, and its corpuscles accumulate and experience definite transformations; and the plastic constituents undergo one of the described metamorphoses within and external to the vessels. This process alone, I designate by the name of inflammation."

And again:

"Stasis of the blood-corpuscles, and consequent metamorphoses of the blood, with or without exudation of proteine, are the only anatomical characteristics of inflammation."

The stages of the inflammatory process are thus divided: Congestion, hyperæmia, stasis, exudation and gangrene. Congestion designates "an unusual flow of blood through a certain portion of the capillary system in a given time;" it may or may not precede the other stages of inflammation. Hyperæmia is "an accumulation of blood in the vessels, produced by a retardation of the circulation," and occurs in two forms, "one, where all the constituents of the blood accumulates, the other, where the corpuscles accumulate with diminution of the liquor sanguinis." The latter occurs in hyperæmia of the capillaries, in the production of which, Dr. Gluge thinks the walls themselves of the capillaries have no agency. "Simultaneously with hyperæmia of a tissue, fusiform dilatations are observed in those capillaries and arteries surrounded by the annular fibrous tunic." Stasis, or stagnation of the blood, with its effects, are thus described:

"If the capillary vessels are stopped up with blood-corpuscles, all movement of the sanguineous column ceases. The so-called lymph-corpuscles increase in number, and the lymph space has disappeared. The blood-corpuscles themselves undergo the following changes: They become grouped frequently in regular columns, resembling piles of coin; their colouring matter dissolves in the small quantity of remaining liquor sanguinis; and they become irregular and fuse into a fibrinous mass. Or they decrease in size, give up their colouring matter and a portion of their fibrine, and become united, by means of a soft, gray, coagulated, albuminous matter, into mulberry-formed groups, the inflammation globules. Accompanying this change, serum, stained red, exudes from the capillary walls, and these are themselves sometimes ruptured, corresponding to the condition of the so-called inflammatory engorgement. Or the blood-corpuscles give up their contents to the liquor sanguinis, which, effusing from the capillaries into the surrounding parenchyma, constitutes fibrinous exudation."

The increase of fibrine in advanced stages of stasis is noticed, and its source is attributed by the author, to "the stagnated blood-corpuscles from which it escapes; for the more the latter decreases, the more the fibrine *increases.*" In the remainder of this section, the termination of inflam-

mation and the causes of hyperæmia and stasis are briefly stated, and the formation of pus, its diagnosis, chemical relations and varieties are clearly described.

Then follows a section on the histological metamorphoses of the blood, another on pyæmia, containing a number of accurate observations, and a last on gangrene.

The remainder of the work presents a large collection of "Observations on histology," illustrated by numerous plates, which, we regret to say, are not as well executed as we would like to have seen them.

C. P. J.

2. *A Clinical Phrase Book, in English and German, containing the usual Questions and Answers employed in examining and prescribing for Patients. With an English-German and German-English Lexicon, Grammatical Appendix, Table of Idioms, &c., &c.* By MONTGOMERY JOHNS, M. D. 12mo, pp. 307. Philadelphia: 1853. Lindsay & Blakiston. (From the Publishers.)

This is an admirable little book designed to aid physicians, unacquainted with the German language, in the acquisition of that limited vocabulary needful in conversing with the sick. It contains a chapter of questions, arranged in the order for a clinical examination recommended by Dr. Stille, with the answers which they would naturally elicit; these phrases include all that is usually necessary for the examination of symptoms requisite for the formation of a correct diagnosis, but a dictionary is added, by the aid of which, with the printed phrases as models, extemporaneous questions can readily be framed. In addition we observe a list of the Materia Medica, a Table of Weights and Measures, a Copper Plate of the German Current Hand, and a Grammatical Synopsis.

The work is executed with the greatest care; no typographical errors, so far as we can judge, or signs of hasty composition. We learn by the preface that Mr. Julius Müller of Leipsic has revised it, and Mr. Sanders of the University of Halle has assisted in compiling the lexicon, while the author's accurate supervision is visible on every page. The notes and quotations indicate the author's familiarity with the classics, and with the medical literature of Europe; perhaps the profusion of citations verges on pedantry, and with the dedication, (*To the Gentlemen, the Faculty of the School of Medicine, &c.,*) savours of scholastic affection, but we readily forgive this fault, if it is one, while the opposite vice is so common in our country. The author modestly disclaims any originality in the design of the book, a similar work having been contemplated by one of his friends. One of John Murray's Hand-books also, composed of phrases in English, German, French and Italian, for the convenience of travellers, contains a chapter of Medical Questions, which we found very serviceable when we had the medical care of an emigrant ship some years ago.

We cheerfully recommend this work to all physicians whose avocations bring them in contact with the ever-increasing tide of German emigrant

population. Both the author and publishers have done their best to make the book acceptable to this large class of the profession.

We well recollect Dr. Johns at College, where his accuracy and ability were generally appreciated; we welcome his first offering to medical literature, and hope hereafter to see the results of his devotion to clinical observation in a work of greater magnitude. O.

3. *La Sifilizzatione studiata qual mezzo curativo e preservativo delle malattie venere, da* CASIMIRO SPERINO. 8vo., pp. 903. Turin: H. Pons. 1853.

Syphilization considered as a curative and preservative method in the venereal disease. By CASIMIR SPERINO, of Turin.

In addition to the various works alluded to in our last number, we observe this new contribution to the teeming literature of Syphilis, from the pen of a distinguished Italian Professor. The advocates of Syphilization, as our readers are probably aware, attempt to establish two points by their doctrine.

1. That constitutional syphilis can be acquired but once, and prevents the reproduction of new symptoms of the same character.

2. That by successive inoculations with pus borrowed from a chancre, the economy may be saturated with the virus, and the development of constitutional symptoms prevented, and the individual rendered inapt to contract syphilis anew.

The Academy of Medicine of Paris has condemned this practice with great unanimity, MM. Malgaigne and Depaul alone being found to advocate it. The Medical Society of London, in a discussion upon a paper by Mr. De Meric, expressed their disapprobation of the system with equal warmth. Nevertheless, the advocates of the new doctrine seem to be gaining ground, despite the stormy debate and opposition to which their proposals have given rise.

The work of Signor Sperino is commended by the foreign reviews. It is a record of facts, and worthily responds to his epigraph: *non verbis sed factis.* Ninety six cases in which syphilization was practiced are carefully detailed, and clearly illustrate the results of the new therapeutical method.

No serious accidents occurred in any case, although the inoculations were prodigally made, even to the number of 92, or even 115; a slight inflammation of the ulcerated surface, or a phagedenic tendency which was easily repressed, were the only unpleasant symptoms which occurred.

In 43 cases of constitutional syphilis, treated by repeated inoculations, 25 were cured; in one no improvement took place; 6 were treated and cured by a combination of iodide of potassium and syphilization; 8 recovered under the employment of mercury, iodide of potassium and syphilization; two died, and in three cases other diseases supervened and the treatment was interrupted.

Of 53 cases of primary syphilis, treated by syphilization, only three exhibited constitutional symptoms, and these three were cured by persevering *in the inoculations.*

We observe that the treatment was extremely prolonged. In 27 cases it lasted for 17 months.

These facts seem calculated to remove many of the objections, and to dispel many of the fears, which have been expressed in regard to this method of prophylaxis; we cannot but believe, however, that a close analysis will prove that the practice is fraught with danger, and is perfectly untenable as a method for treating syphilis. The French Government has appointed a commission to decide the question, and we may rely that the facts of M. Sperino, as well as those promulgated by M. Auzias, in whose footsteps he follows, will be carefully sifted.*

The work has been translated, and will shortly appear in French.

4. *A Treatise on the Anatomy, Physiology and Diseases of the Human Ear.* By James Bryan, M. D., Prof. of Surgery in Geneva Med. College. Prof. of Med. Jurisprudence and Institutes of Med. in Phila. College of Medicine. Ed. of Phila. Med. and Surg. Journal, &c. 8vo., pp. 124. Philadelphia: Published by the Author. 1851. (From the Author.)

It is hardly within the design of this journal to notice other than recent contributions to medical literature. We have glanced over this book, however, in the hope of finding something to commend, for we have a kindly feeling towards all monographs. "These are the works precious for the advancement of science, says De Candolle, for the subject here being limited, is usually treated elaborately. No class of writers deserve more encouragement or gratitude than monographists, because their task is obscure and ungrateful in itself." We wish that we could apply the opinion of the learned botanist to the author of the work before us.

A monograph of this sort should be distinguished as a learned and methodical exposition of all that has been written on the subject; or else it should contain the careful record of long experience; or lastly, it should throw some light on pathological difficulties, or propose some new modes of practice.

We do not know which of these ends the author has proposed to himself, but we are certain that he has not attained mediocrity in any. The anatomical details are meagre and indefinite; there is an entire absence of pathological descriptions; the practical directions are an unsatisfactory recapitulation of the unsatisfactory methods of treatment hitherto devised for the cure of aural diseases.

A note enclosed in the volume, informs us that one dollar sent to the author will secure a copy of the work by return of mail; but it is our painful duty, as impartial reviewers, to declare in conclusion, that the book, weighed against the money the author demands for it, is (in our judgment) very greatly the lighter.

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* Since the above was written, the latest French Journals have brought us the Report of the Commission, which is entirely adverse to the practice of Syphilization, and proposes that it shall be prohibited by law.

5. *The Principles of Botany, as exemplified in the Cryptogamia.* By HARLAND COULTAS. 8vo., pp. 94. Philadelphia: Lindsay & Blakiston. 1853. (From the Publishers.)

This little work is elementary in its character. It is composed with simplicity, clearness and good taste; and may be studied with advantage by beginners in the science of botany.

6. *Guy's Hospital Reports.* Edited by E. L. BIRKETT and ALFRED POLAND. Vol. VIII., Part I. London: John Churchill. (From H. Ballière.)

This fasciculus contains the following contributions:

1. *Cases of Pneumo-Thorax, with Remarks;* by Dr. H. Hughes. 29 pages.

2. *Cases selected from the Ward Books at Petersham House;* by John C. W. Lever. 29 pages.

3. *On the Pulse;* by Dr. Barlow. 10 pages.

4. *Intra-Uterine Polypus of great size, developed during pregnancy;* by Dr. Oldham. 9 pages.

5. *Case of Opthalmia;* by John F. France. 3 pages. [Published as an additional link in the chain of pathological evidence in proof of the dependence of the contractility of the iris upon the integrity of the third cerebral nerve.]

6. *A further Report on the value of Electricity as a Remedial Agent;* by Wm. Gull, M. D. 64 pages.

7. *Parthogenetic Tumour, attached to the Muscular Tissue of the Left Ventricle of the Heart of a Sheep;* by Dr. Gull. 3 pages and a plate.

8. *Vitiligoidea plana et tuberosa;* by Dr. Gull. 2 pages and a plate.

9. *A few Remarks on a peculiar Follicular Disease;* by Edward Cock. 9 pages, with 8 plates.

10. *Cases of Intestinal Obstruction relieved by Operation, with Remarks;* by John Hilton, F. R. S. 20 pages and 2 plates.

We have only space to give a list of the contents of this really valuable work. We shall attempt in future to present some extracts to our readers.

7. *On the Diseases of the Bladder and Prostate Gland.* By WILLIAM COULSON, Surgeon to St. Mary's Hospital, &c. Fourth edition, revised and enlarged. 8vo. pp. 485. London: John Churchill. 1853. (From H. Ballière.)

The lectures of this surgeon on lithotomy and lithotrity, which have been recently published in the Lancet, have been generally appreciated in this country, and have established the author's reputation as an authority on affections of the genito-urinary organs. In the work which he has now republished, he has embodied the results which chemistry and microscopy have contributed to this department of medicine, and has revised the remainder of the work, and brought it up to the present state of our knowl-

edge on the subject. We shall refer to this work again, but, in the meantime, we desire to recommend it as the very best treatise on the subject in our language.

8. *Bulletin de l'Académie impériale de Medeceine.* T. XVIII, Nos. 8 et 9. Jan. 31, Fév. 15. Paris: J. B. Ballière.

Bulletin of the Academy of Medicine. Directed by MM. DUBOIS, (d'-Amiens,) Perpetual Secretary, and GIBERT, Annual Secretary.

The last two numbers of the proceedings of this learned Company, are almost exclusively devoted to M. Bouvier's report upon ladies' corsets.

As our readers are probably aware, the Academy of Medicine was instituted to reply to inquiries of the government relative to everything that concerns the public health. The Minister of Commerce had sent to the Academy, the "corsets without seams" of Werly, and "corsets with a peculiar busk" of Joubert, (for which their inventors wished to take out patents,) to know whether they possessed any advantages. The Academy, thinking with propriety, that no subject affecting the health is beneath consideration, appointed a commission to report on the matter, and M. Bouvier has furnished a most elaborate and erudite essay; to compose which, he seems to have ransacked ancient and modern history. The first part of his report is historical, and the following are his conclusions:

"1. The history of the dress of the principal people of antiquity shows that the want of a retentive garment, more or less constricting, round the trunk in the female was felt in ancient as well as in modern Europe.

"2. In other times, as now, women have been disposed to overdo this circular constriction, to the detriment of their health.

"3. In the history of modern civilization, one sees after the relinquishment of the ample tunic of the Roman ladies, the figure first simply surrounded in a well-fitting corsage; then inclosed and bound in a sort of cuirass, called "corps à baleines;" and, lastly, brought out and supported by the present corset, the last form of this special garment.

"4. Although corsets, when improperly employed, may be prejudicial, yet, when well made and well adjusted, they have not the injurious effects usually ascribed to them.

"5. It is an error to attribute the constriction of the lower part of the chest to the influence of stays. A constriction is normal, within certain limits, in both sexes, and subject to vary from other causes than the pressure exercised by this article of dress.

"6. There is no proof that the use of corsets produces deformity of the vetebral column.

"7. Not only should motives deduced from æsthetics and from the social destination of woman induce the physician to permit the use of corsets, under proper restrictions, but, moreover, there are many circumstances, such as the volume of the bosom, the relaxation or the distension of the muscular wall of the abdomen, the habitual bending of the trunk, the lateral deviation of the spine, etc., which give formal indications for the employment of this sort of bandage, whether upon hygienic principles, or as an aid to cure certain lesions."

The second part of this contribution to medical literature, is devoted to the examination of the different forms of the modern corset, and particularly of the two *varieties sent by the* Minister. M. Bouvier declared that

they possessed no particular advantages. The Academy received the report and adopted its conclusions.

9. *Elements of Health and Principles of Female Hygiene.* By E. J. TILT, M. D., Senior Physician to the Paddington Dispensary and Lying-in Charity, &c. Royal 12mo, pp. 436. Philadelphia: 1853. Lindsay & Blakiston. (From the Publishers.)

We wish all the books which come uuder our notice deserved the same commendation as this. The author has been judicious in the selection of his subject and most faithful in its execution, giving us a volume important enough to be interesting, and not so large as to frighten us from its perusal. There is no subject connected with general information of more importance than the laws of health, yet it has been crowded from the platform of medical topics to make room for vagaries of no sort of practical utility. Descartes said, "if it be possible to perfect human nature the means must be sought in the study of medicine." No one pretends to perfect human nature by physicking it, and the sentiment of the distinguished savant must be gleaned from the fact that the study of medicine teaches us much better how to preserve health than to restore it. And while hygiene has been regarded as a subject too unscientific for capacious minds, we see no reason why this heresy to good sense should be persevered in, for experience having taught us that all diseases cannot be cured, it would be very sensible to try the preventive. The machinery of medicine, with all its improvements and adaptations, cannot keep pace with the degeneracy of human nature and its proclivity to disease, and hence Dr. Tilt, while not originating, has revived the idea that more attention should be paid to the proper means for keeping off disease. Casting a retrospective glance at nations, we find that man has been degenerating in his mental, moral and physical attributes. Fashion and education have been bold contributors to this condition of things, and it is time that their influence were rectified. The body must be fortified against disease and deformity; the mind against ignorance, prejudice and sophism; the moral principle against many vices. How much of this duty devolves upon the physician may be conceived; how proper then is it for him to study the laws of Hygiene. Dr. Tilt says that his predecessors have had chiefly in view the health and diseases of man, while he has devoted his chief attention to the constitution and affections peculiar to woman. His work, therefore, while it does not comprehend all that has reference to this important department, is nevertheless a volume in this branch of study, and as such no practical physician should be without it. T.

10. *Address to the Graduates of the Medical Department of Hampden Sidney College, at the Commencement, March* 14, 1853. By Professor MAUPIN.

11. *On the Non-Contagious Character of Puerperal Fever. An Introductory Lecture.* By HUGH L. HODGE, M. D., Professor of Obstetrics in the *University of* Pennsylvania.

12. *An Address to the Graduates of the Medical Department of the St. Louis University, March* 1, 1853. By M. M. PALLEN, M. D., Professor of Obstetrics.

13. *A Valedictory Address to the Graduates of the University of Pennsylvania, April* 2, 1853. By JOSEPH CARSON, M. D., Professor of Materia Medica.

14. *A Valedictory Address to the Graduating Class of the Memphis Medical College.* By H. V. WOOTEN, M. D., Professor of the Principles and Practice of Medicine.

We have only space to acknowledge the reception of these congratulations to the young men recently admitted into our profession—a species of literature which the multitude of medical colleges renders sufficiently abundant. It is to be hoped that they chronicle the admission of many good and useful confederates in our work, as well as of illiterate invaders.

The subject of Dr. Maupin's discourse is upon the advancement of medical science as a means of perfecting the human race; he briefly and eloquently reviews the contributions of the various departments of medical science towards the intellectual and physical welfare of man; and then inquires into the causes and remedies of the fact—that, notwithstanding the number of intelligent and educated men enlisted in it, the profession in Virginia have done little for this great cause, out of their own limited sphere. We recommend a perusal of this excellent address to our readers.

Dr. Hodge's examination of the arguments of the advocates of the contagious character of puerperal fever, is worthy of his exalted reputation. In our judgment, he has clearly made out his case.

Dr. Pallen's discourse is directed against the "infinitesimal nonsense and prosaic absurdities of Hahnemann's followers." We are fully of Dr. Stille's opinion, that labour is wasted in attempting to annihilate these "vexatiously minute parasites of the body medical." It may be well enough to enlighten students upon their fallacies, but beyond this there is little utility in hunting such small game; "the trophies of the chase are hardly worth the bringing home."

Dr. Carson's address is of the most refined and elevated tone. He impressively describes the duties of a true physician, and exhorts to act in a manner becoming the followers of a liberal and noble profession.

Dr. Wooten has written a discourse on "character." He extols the various virtues successively, and urges the importance of an honourable character in remarks which, though tedious, are undeniably true. O.

MORTALITY OF THE CITY OF RICHMOND.*

Interments in the Shockoe Hill Burying Ground, from the 15th day of March to the 15th day of April 1853.

REPORTED BY A. MICHAELS, SUPERINTENDENT.

		Diseases.	
Adults,	21	Pneumonia,	10
		Consumption,	8
Between 10 and 21 years,	5	Effusion upon the Brain,	3
		Whooping Cough,	2
Under 10 years,	17	Scarlet Fever,	2
		General Decline,	2
Still Born,	2	Other Diseases,	8
		Unknown,	8
	—	Still Born,	2
Total,	45		45

Coloured Persons Burying Ground.

		Diseases.	
Adults,	34	Pneumonia,	18
		Paralysis,	2
Between 10 and 21 years,	4	Consumption,	4
		Old age,	4
Under 10 years,	11	Scarlet Fever,	2
		Other Diseases,	7
Still Born,	1	Accidents,	2
		Still Born,	1
	—	Unknown,	10
Total,	50		50

* The report does not include the interments in Hollywood, and the private cemetery of free coloured persons. These interments are however few, and making allowance for the number of persons who die out of the corporate limits of the city and are interred within the Shockoe Hill Cemetery, the aggregate 95 is a fair estimate of the mortality of the city proper.

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL

FOR JUNE 1853.

ART. I.—*A Translation of M. Ricord's Notes to Hunter on the Venereal Disease.** By F. J. BUMSTEAD, M. D., Physician to the North-Western Dispensary, New York.

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"Of the Swelling of the Glands from Sympathy."

P. RICORD. Without going into all the details relative to buboes in general, which we shall consider hereafter, I may be allowed to point out some facts, which observation and experiment have taught me.

Compared with the frequency of gonorrhœa, an accompanying bubo is very rare.

It commonly appears at the outset, or during the acute stage, of a discharge.

Unless it occurs in persons, otherwise disposed to glandular engorgements, in consequence of a lymphatic temperament, or a scrofulous diathesis, it has little tendency to suppuration, and its resolution is generally rapid.

The greater or less degree of inflammation and pain attending a bubo, to which we would give the epithet "blennorrhagic," cannot serve to distinguish a bubo by absorption from a sympathetic bubo, as Hunter seems to think. The severity of the inflammation and pain, the duration, the mode of termination, and the influence of treatment, in this disease, depend on collateral causes, pertaining to the individual, and foreign to the blennorrhagia, which is not here a specific cause.

A bubo accompanying gonorrhœa is never syphilitic, as Hunter sup-

* See May number, p. 85.

poses, unless there exists at the time a chancre, of which the bubo is the consequence.

Glandular engorgements occurring during the course of a gonorrhœa, and terminating in suppuration, never furnish inoculable pus; nor, in this case, are constitutional symptoms ever observed. We shall see hereafter, that buboes following the absorption of pus from a chancre, or virulent buboes so called, furnish pus, which can always be inoculated.

The explanation of those cases, in which a patient has a true virulent bubo, with symptoms of gonorrhœa as the antecedent, is, that there was a chancre somewhere.

"Of the Gonorrhœa in Women."

P. RICORD. As any one may convince himself from the writings of authors preceding Hunter, of Hunter himself, and of those who have followed this great master, the knowledge of gonorrhœa in women was necessarily incomplete and enveloped in mystery, until the use of the speculum enabled me to better appreciate a multitude of important circumstances connected with it.

1. *Its seat.* Gonorrhœa may affect the vulva, the urethra, the vagina, or the uterus, either singly or all together; or again, it may occur in different combinations, such as the vulva and uterus together, or these parts in connexion with the vagina, etc.; which constitute so many varieties.

2. *Relative frequency of situation.* 1, the vagina; 2, the urethra; 3, the vulva; 4, the uterus. In case of combination: 1, the vulva, urethra and vagina together; 2, the vagina and uterus; 3, the vulva, urethra, vagina and uterus.

3. *Its extension.* It extends from the vagina to the neighbouring parts; also from the superficial and external to the deeper parts, which are the last affected and the most difficult of cure.

4. *Its commencement.* Difficult of accurate appreciation in women, in consequence of the possible existence of a previous discharge.

5. *Alterations of tissue.* Simple redness, either circumscribed or general; more or less decided tumefaction; erosions and ulcerations presenting the same varieties as are met with in balanitis or urethritis of the male. The follicles of the vagina are often very much developed, and present a granular, mammillated aspect, which has led me to apply to this variety the name of *psorélytrie.* The os often presents granular ulcerations. These granulations, which resemble ordinary fungous granulations, or those appearing on certain vesicated surfaces, or the granulations met with on other inflamed mucous membranes, may last a very long time; they are generally ill-defined, and may, notwithstanding what has been said on the subject, occupy indifferently the two lips of the os, or extend into the cavity of the neck. It is not very uncommon to see these granulations pass into the state of true vegetations.

These granulations are not necessarily the consequence of one specific inflammation, rather than another, as some superficial observers *have supposed.*

6. *Symptoms.* All the symptoms of catarrhal inflammation, varying only according to the seat of the disease: thus, when situated in the urethra, pain in micturition; in the vulva, pain from friction and walking; tension; often severe itching, and sometimes increased sexual desire; in the vulva and vagina, pain in copulation; in the uterus, sometimes symptoms of metritis, always those of uterine catarrh.

Discharge. Mucous at first, it soon becomes purulent; afterwards, towards its termination, or in a chronic state, it is often lactescent or creamy. It is bloody in cases analogous to those which I have mentioned in speaking of the disease in man; but any mixture with the menses must be taken into account. It is liquid, and free from viscidity, in the urethra, vulva and vagina; glutinous, flaky, or ropy, like the white of eggs, when it is furnished by the uterus. It is alkaline in the vulva, urethra and uterus, whilst it is acid in the vagina; it may possess a more or less marked odour, resembling the smell of some fishes in a state of decomposition, or in the deeper parts of the vagina, it may assume a very decided smell of sulphuretted hydrogen.

7. *Complications.* Phlegmonous inflammation in the neighbourhood, terminating frequently, when acute, in abscesses in the labia, inflammation and suppuration of the glands of the vulva. Chancres may coexist, situated externally, or concealed in the vagina or urethra, on the os or in the cavity of the neck; and it is only in these cases, that a discharge, gonorrhœal in appearance, can give rise to chancres, as it flows over the neighbouring parts or upon the anus, or can communicate chancres to persons, who are exposed to its infection.

The ovaries may be affected, as the epididymis is in man. I have had the opportunity of observing this complication, whose existence Hunter dares neither to deny nor fully to admit; and if any one will take the trouble to look for it, he will find it often enough to be convinced of the fact.

I will cite the two following cases:

A patient, in my wards, aged thirty two, affected, for the first time, with a very acute gonorrhœa of the uterus and genital organs, was suddenly seized with a swelling of the left iliac fossa. On handling the part, the tumefaction was well marked; the temperature of the part increased, and the examination occasioned much pain: nausea and a febrile movement ensued, with a full pulse. The patient lay on her back, inclined a little to the left, her thighs slightly flexed on the pelvis. The discharge from the urethra and genital organs had almost entirely disappeared. On examination per vaginam, I found the following: pressure on the neck with the index finger was not painful, but pain was excited and a sensation of tension in the left broad ligament, when the finger, placed on the left side of the womb, thrust this organ towards the right iliac fossa; the same thing done on the other side, for the sake of comparison, caused scarcely any inconvenience: defecation, emission of urine, and in general all movements of the abdomen were painful. These symptoms, treated by antiphlogistics, disappeared about the twelfth day, and as their intensity diminished, the discharge gradually became again more abundant; when suddenly, the discharge decreased again, and the same series of symptoms appeared, but this time on the right side.

Again, the pupils who follow my clinique, have been able to observe

a case almost precisely similar to the one just reported; but the left side alone was affected.

Buboes are very uncommon; they rarely appear unless the urethra is affected.

8. *Progress.* Acute at the outset, with a decided tendency to a chronic stage, under which form it may even commence.

9. *Duration.* Rarely short, often indefinite.

10. *Terminations.* The cure of gonorrhœa is rarely spontaneous, and generally follows proper treatment. There are, however, many cases which one is inclined to believe incurable, perhaps owing to the want of thought and care on the part of the women, who are very different in this respect from men. Such cases are disguised under the convenient and common name of "whites."

11. *Causes.* From all that precedes, can we infer the existence of a distinct and specific cause? I will not repeat what I have said elsewhere. If the arguments already presented are not forgotten, and to them be added what Hunter says in this chapter, any one will be convinced that different causes may produce effects analogous to those that have been thought characteristic of the action of a peculiar virus.

12. Nothing but the presence of a chancre or its consequences, can absolutely prove a woman to be what Petronius called an infected female.

As we have proved, the signs given by Gault, Charleton, Van Swieten and De Graff, dependent on the locality which they assign to gonorrhœa, in the neighbourhood of the meatus urinarius, are of no value.

The cessation of the blennorrhagic discharge, whilst leucorrhœa may continue, during the menstrual period, as John Fernel, Liebault, Mercatus, &c. thought, and which Baglivi regarded as an infallible sign, is also illusive.

The absence of pain, according to Pinel, and that felt in the emission of urine, according to Charleton, have no more value than the whitish and copperish stains, and the pale red tint, given by M. Richerand.

After what I have said above, we also know what value to attach to the alterations in the tissues, with regard to which M. Lagneau entirely agrees with me.

As to the power of infection of the discharge in a female, as well as in the male, it depends rather on its acrid, irritating nature, than on anything else, and can lead to no rigorous conclusion.

Finally, if we refer to the age of the patient, to the moral presumption in the case, or to the antecedents, we are still left in the dark; for whatever the causes are, the symptoms produced are identical.

Hence, by means of the preceding signs, we can only establish different varieties in those inflammations in women which are reputed blennorrhagic, without approximating nearer to a knowledge of their cause; but in every case, any one can distinguish, as I have done, the blennorrhagia of a chancre, by means of the speculum or inoculation.

One fact, which I ought to mention, giving it only that degree of *importance* which it deserves, is, that in every case of urethral blennor-

rhagia that I have met with, the woman confessed that she had caught the disease, or at least that she had been exposed to it.

Of the Cure of Gonorrhœa.

P. Ricord. Allow me to give the results of my personal experience in the treatment of gonorrhœa.

Gonorrhœa is a disease, primarily and almost always definitely, local in its character.

Complications are sometimes developed in the neighbouring parts, through continuity or contiguity of tissue; but sympathetic effects at a distance are very much less frequent.

The number and gravity of supervening symptoms are in proportion, not only to the intensity of the primary affection, but also to its duration.

Blennorrhagia does not immediately attain its maximum severity; nor does it run through regular stages, nor last a limited time.

In spite of Hunter's ideas to the contrary, we are too far removed from a pure Stahlism, to coincide with the vulgar belief in the necessity of suppuration, and the need of letting the discharge run on. The abundance of the suppuration is in proportion to the degree of the inflammation, and is not a cause of the diminution of the latter. The pretended danger of a rapid cure, or of driving in the discharge, is imaginary: and the contrary proposition may be proved, viz: the more rapid the cure, the more speedy security from complications.

It results from this proposition, that the treatment of blennorrhagia should aim to prevent its development; to diminish the intensity of its symptoms, when we have been unable to stop it at the outset; and, finally, in every case to abridge its duration as much as possible. It is necessary therefore to divide treatment into abortive, palliative and curative.

The agents in the abortive treatment are direct or indirect. They may be employed alone or together.

Whilst there is as yet no sign of acute inflammation, on the first, second, third or fourth day, or even later, we may employ injections of nitrate of silver, or use this salt in a solid state, prescribing at the same time, cubebs or copaiba internally. Nitrate of silver is an excellent and powerful modifier of inflamed mucous membranes, but it is not without some inconveniences: it often excites much pain, and the artificial inflammation which it causes, is sometimes so severe as to occasion symptoms, which, although transient, are none the less disagreeable. I have almost entirely renounced its use.

If there already exists some degree of inflammation and pain, or these symptoms appear under the influence of injections, we should abandon their use, continuing meanwhile the internal remedies, aided by diet and other means, which we proceed to indicate.

As soon as the inflammatory stage is fully established, abortive treatment is no longer applicable, for it may injure rather than benefit.

In this case, we should employ the palliative treatment of the acute stage, which may be summed up as follows:

General repose of the patient, but above all, local repose of the affected part; the use of a suspensory bandage, when walking or in the upright position; strict diet, proportioned however to the strength of the individual and the severity of the disease; avoidance of excitants of every kind, particularly liquors, beer, asparagus, etc.; copious cooling drinks, suited to the taste of the patient.

Freedom of the intestinal canal, by means of enemata or gentle purgatives; protracted warm baths, noticing however their effect, some patients not supporting them well; local bathing for the sake of cleanliness, or for its sedative effect, bewaring again lest it occasion conjestion or favour œdema; lotions, fomentations, cataplasms, following the same rules.

Local blood letting when the disease is free from general reaction; venesection in the opposite condition. In the first case, giving the preference to leeches, they should be applied as near as possible to the diseased parts, avoiding, in cases complicated with chancres, any sloping parts within reach of the pus, and in every case, those regions where lax cellular tissue favours œdema, and exposes the patient to the severe symptoms of erysipelatous inflammation and even to gangrene, as has been seen to take place in the scrotum, penis, eyelids, &c.

When the acute stage subsides, as is shown by the diminution or complete cessation of pain in micturition, much more than by the absence of pain in erections, which as Hunter justly observes, may continue to be painful a long time after all running has stopped; we should no longer persist in antiphlogistic treatment, which, far from curing in most cases, as has been advanced, tends on the contrary to make the disease pass into an indefinitely chronic stage.

We should immediately abandon the use of general bathing, which may not only keep up the disease in this stage, but even cause its return, when resumed too soon after a cure.

A more tonic regimen should gradually be employed; while antiblennorrhagic remedies properly so called are prescribed. Here as in the abortive treatment, two modes present themselves: the direct and indirect.

I. *Direct treatment.* Direct or local medication should rank first. The indications, which it should fulfil are: to isolate the diseased mucous membranes, by preventing their coming in contact; to oppose the stay and stagnation of morbid secretions in the parts; and to dry up the discharge.

The first indication is not easily fulfilled in urethral blennorrhagia, although I have attempted it with success in many cases, of which I will hereafter speak. As to the other conditions of direct treatment, they are specially fulfilled by the use of injections.

Without seeking or absolutely rejecting a specific in injections, it is very certain, that among the remedies employed in this form, there are some which often have a most happy effect. In this respect, nitrate of silver has been ranked first; its action is so remarkable in the treatment of most of the inflammations of mucous membranes.

The formula, to which I formerly gave the preference, and which

may be used in the abortive treatment, is the same as proposed by Prof. Serres, of Montpellier, after having witnessed my practice.

℞. Argenti nitratis, gr. ij.
Aquæ destillatæ, ℥viij.
M.

Injections of this liquid should be made with a glass syringe.

The injections should be cold, and they should not be prevented from running the whole length of the canal, in order that they may reach in every case the diseased part.

The number of injections during the day should be limited; six a day are generally sufficient without fatiguing the canal. If after a day or two the running increases, and especially if it becomes a little bloody, the injections are to be suspended. The morbid secretion soon diminishes and dries up, or at least resumes that degree of intensity which it had at first. In the first case, injections are no longer advantageous; in the second, they must be resumed. Sometimes, however, nitrate of silver of the strength above mentioned, has little effect on the progress of the disease; in which case its strength should gradually be increased until one of the results mentioned is produced.

Dr. Carmichael, in England, in 1841, and Dr. Debeney, in France, in 1843, proposed caustic injections, at a strength of twelve or fifteen grains to an ounce, in all stages of gonorrhœa. This method, strongly opposed by my learned friend Dr. Venot, of Bordeaux, often has a happy effect, in the abortive treatment. However, I now prefer the following injections:

℞. Aquæ Rosæ, ℥vj.
Zinci Sulphatis,
Plumbi Acetatis, āā., gr. xxx.
M.

The following is another formula, which I have often used with success:

℞. Aquæ Rosæ, ℥vj.
Zinci Sulphatis, gr. xv.
Plumbi Acetatis, gr. xxx.
Tinct. Catechu,
Vini Opii, āā., ℥j.
M.

The mixture should be shaken before using, and three injections given daily, letting the fluid remain in half a minute, or a minute, if there is not too great sensibility.

It is not necessary, however, to exclude other injections from our practice; we may perhaps direct their employment as follows:

Injections of acetate of lead, when nitrate of silver irritates, without doing any good; of zinc, when these two fail; of tannin and wine, when there is atony and a relaxed state of the membrane; with the addition of laudanum, when there is need of a sedative astringent;

and, finally, injections of corrosive sublimate, iodine, iodide of iron, and even the caustics, when it is necessary, as we shall see farther on, to produce a more profound modification or perturbation of the part. Injections of chloroform have not succeeded in my hands.

Injections have been reproached:

1. With exposing the patient to repeated and dangerous handling of the parts. This objection is ridiculous.

2. They have been accused of driving in the contagious matter, and of prolonging the disease. This effect is anything but proved.

3. It has been thought that they often excited inflammation of the neck of the bladder, and engorgements of the epididymis. Badly administered and highly concentrated, or made of unsuitable ingredients, they may produce this effect; but, in this case, the fault is not in the remedy, but must be ascribed to those who have badly applied it.

4. Finally, the most formidable and stubborn objection is the assertion, that injections are the most common cause of strictures of the urethra.

In opposition to the ideas, which men are prone to promulgate on this subject, it may be said: that injections not only do not cause strictures in any case, but that on the contrary, they anticipate them, when they promptly stop a blennorrhagia; and that even in certain cases of soft hypertrophy of the urethra, they may cure strictures dependent thereon.

Those patients, who have strictures after using injections, are those, in whom, the running was not stopped; and it was its persistance, which caused an alteration of the tissues, as occurs in all inflammations which last too long.

In short, the bad effects of injections pertain to their bad administration, or to their want of action.

II. *Indirect treatment;* should be employed as soon as the use of injections is commenced. In some cases even, when the urethra is still too susceptible, or becomes irritable under the influence of injections, indirect treatment should at the outset or subsequently, be employed alone.

Indirect remedies may be enumerated in the following order, according to their greater or less degree of efficacy: copaiba, cubebs, the turpentines, purgatives, diuretics, astringents, tonics, iodine, diaphoretics, etc.

Copaiba, to which Hunter seems to grant only the power of diminishing the morbid secretion, without having any marked influence on the inflammation, which produces it, has however the latter effect to such a degree, when it is properly employed, that we are forced, in spite of M. Jourdan's prejudices, to accord to it a certain specific antiblennorrhagic property.

Copaiba acts on the stomach, the intestines, the urinary passages, the skin, and in some rare cases, on the nervous centres.

In the stomach, it excites nausea, eructations, retching, and when not tolerated, vomiting; or it causes irritation and true inflammation. These various effects on the stomach are so much lost, and have no curative action on the blennorrhagia.

In the intestinal canal, it may simply purge, or at times cause constipation, or it may excite different degrees of inflammation. It is however in this part of the digestive organs, that the beneficial action of copaiba takes place. In some patients, its good effects are proportioned to the aloine evacuations it excites, whilst in others, the contrary is observed. These different conditions of success, can only be determined *a posteori*.

But copaiba produces its most powerful effect, when it traverses the urinary passages, which takes place, only when it is tolerated by the intestinal canal. This action is shown by a slight increase in the secretion of the urine; whose odour combining with that of the remedy, undergoes a change; or, by an irritation, sometimes considerable, of the neck of the bladder, which excites frequent desire to urinate, and finally by a general increase of the burning in the urethra during micturition. Here, in its effect on the urethra, we recognize the almost specific action of balsam of copaiba; and we may assert, that it is as powerful in the treatment of urethral blennorrhagia in the two sexes, as it is inert in the other varieties of this affection.

In proof of this statement, I will report the following case, which I published in the third number of my *Iconographie de l'hôpital des vénériens.*

Accidental division of the urethra; Blennorrhagic urethritis; Urethroplastic operation.—T——, aged 26, a shoemaker, entered ward No. 3, June 16, 1840.

This patient, at the age of seven, in one of those odd caprices, that have given rise to so many curious accidents connected with the genital organs, took it into his head to tie a thread round his penis. This thread, drawn tight, a little in front of the scrotum, produced the following day, considerable swelling of the tissues, beneath which, it soon disappeared, cutting its way through the skin. To the general tumefaction of the parts, and the section of the integument, retention of urine was added, which the patient declares was complete during a period of 14 days.

At this time, that is to say on the 14th day, the urethra was in turn divided by the thread, and a large quantity of urine escaped through the accidental opening which was made.

It was only then, if we may believe the patient, that his parents, who, up to that time, were ignorant of his state, called in a physician, in consequence of the grave symptoms, which supervened, and of which he can give no clear account. We will not describe in detail, the treatment which the patient received under these circumstances; and we will only say, that he recollects perfectly, that the thread could never be found, in spite of all the care, with which the physician looked after it. However, at the end of six weeks, he was cured, but still retained the vice of conformation, which he had acquired, and with which, he presents himself to our observation.

The spongy portion of the urethra is now divided through its whole thickness, a little in front of the scrotum, and the canal is thus cut into two parts, the one connected with the bladder, the other with the penis. The two accidental orifices, resulting from this division, at the distance of about an inch from each other, are slightly swollen, directed obliquely downwards, and present an eversion of the mucous membrane. The tissue lying between and around them consists of a deep and hard cicatrix, which forms

a ring or circle, constricting the yard, at the same point in its whole circumference. Partly, in consequence of congenital malformation, but especially from the former inflammation, a phimosis exists, which entirely prevents the gland from being uncovered.

His urine is discharged in a perfectly straight stream, and is perhaps a little inclined to curve towards the pubis. The anterior portion of the urethra does not appear to participate in the turgescence of erection as much as is observed in the normal state, and the gland is certainly less florid. This portion also takes no part in voluptuous sensations, which are limited to the posterior portion of the canal, so that the fossa navicularis in this patient is not the goal or rendezvous of urethral sympathies. Ejaculation is performed in the same way as the emission of urine; but the semen, which is projected with much less force than in the ordinary state, does not pass through the anterior portion of the canal.

The patient was in this state, when the first of June 1849, eight days after having intercourse, a gonorrhœal discharge appeared. The disease began in the vesical portion of the urethra, and it was only four days later, that the external portion became in turn affected: the discharge then flowed from the orifice of the vesical portion, and from the two orifices of the external portion, [the meatus urinarius and the accidental opening].

June 17th. The inflammation is every where very intense; the discharge is very abundant, strongly purulent and greenish; however, in spite of these decided symptoms of extreme severity of the disease, the vesical portion of the canal, which alone is traversed by the urine, is also the only seat of pain during the emission of this fluid, and the external portion is slightly sensitive only on pressure. Erections are not at all painful, the canal being divided in the most favourable part for preventing the formation of what is usually called "the cord," the result of a deficient lengthening of the canal, rendered rigid by inflammation, which is observed in gonorrhœa attended by chordee. The patient is ordered a light diet, a cooling tisane, and a bath.

June 19th. The acute stage has almost entirely yielded to repose and antiphlogistic regimen. There still remains a little pain in passing water. Six drachms of cubebs are ordered in three doses; continue the same regimen; suspend the baths.

June 21st. The morbid sensation has considerably diminished in the vesical portion of the urethra; whilst it has undergone no modification in the external portion.

June 24th. The running has entirely stopped in the vesical portion; the cubebs is continued; the diet increased by one half.

July 1st. The cubebs is omitted; there has been no trace of a discharge in the vesical portion. The condition of the external portion does not appear modified; the same diet is continued.

July 6th. The morbid discharge has reappeared in that portion of the urethra in which it stopped; and this is perhaps explained by the fact, that during the administration of the cubebs, the abnormal orifices of the canal were kept separated; whilst after the cure of the vesical portion, the pus furnished by the external portion was allowed to come in contact with the orifice of the sound portion of the canal.

July 8th. The previous treatment is resumed, and six drachms of cubebs given; the regimen as before.

July 16th. The gonorrhœal discharge is again dried up in the vesical portion of the urethra; the treatment and regimen are continued.

July 17th. A solution of nitrate of silver, [a grain and a half of the crystallized nitrate to six ounces of water,] is injected into the external portion of the urethra, in order to cure the discharge of which it is the *seat; the same* treatment and regimen.

July 20th. Under the influence of the injections of nitrate of silver, the gonorrhœal discharge from the external portion of the urethra, has almost entirely disappeared. Treatment and regimen as before.

July 22d. There is no trace of a discharge remaining in any part of the canal; all treatment is stopped, but the regimen is continued.

July 26th. The cure of the gonorrhœa is complete; there is not the least morbid secretion. Desiring to allow the patient a few days rest before performing the urethro-plastic operation, that his state requires, he is allowed to go out and arrange some private business.

Although he promised to return sooner, T— was not able to come back to the hospital till October 1840.

The preceding observation is interesting as regards external treatment, and the action of antiblennorrhagics. The state of the patient presented a fine opportunity of studying the mode of action of these remedies, which are almost specific in urethral blennorrhagia, but which have scarcely any effect in other varieties of blennorrhagia. We were able to convince ourselves in this case, in the clearest manner possible, that antiblennorrhagics act especially in virtue of the peculiar modification which they undergo in passing through the renal filter to be afterwards transported by the urine, and applied locally to the diseased mucous membranes, which this fluid traverses; and they are thus applied with their elements better combined, or with curative properties, which vital chemistry, and the mechanism of certain functions, alone have the secret of extracting and applying. Indeed, it will be recollected that, twice in the case of T—, cubebs exerted a curative action only on that portion of the urethra, which the medicated urine traversed, whilst that part which was foreign to the discharge of this fluid, underwent no modification.

I do not, however, deny the general action of the balsams, as I have been charged with doing; I admit, as every body does, that they may communicate certain properties to the blood, and modify certain secretions. I am equally convinced of their revulsive action. But experience has taught me as well as others, that this is their most feeble and uncertain mode of action, as has been seen in the above case, by the persistence of the gonorrhœa in the anterior portion of T—'s urethra; and as may be seen every day in the treatment of balanitis, of discharges from the vulva, vagina or uterus, and in gonorrhœal ophthalmia, where they produce no more effect. In some cases, more or less acute irritation of the digestive organs is excited, and vomiting, or oftener diarrhœa, induced; in such cases, they will modify or even suppress certain runnings, without communicating, at least in an appreciable degree, any of their elements to the urine; experience teaches, that in these cases, the suppression of the disease is only temporary, and that it reappears as soon as we suspend the use of remedies, which have acted only in the general manner of revulsives, without any specific effect. It may be added that if, with intention of maintaining the cure, the dose of these drugs is increased, so as to surpass the safe bounds of revulsive action, and if we thus produce a true inflammatory state of the gastro-intestinal mucous membrane, then again the revulsive action stops, and the blennorrhagia re-

appears; but this time the more intense and obstinate, since the trouble produced in the digestive organs, now favours the disease which we wish to combat, and deprives us of the use of an internal remedy, which might have been more wisely administered.

On the other hand, when the balsams taken internally exert their action on the skin, and produce eruptions, commonly no revulsive action is observed, and the blennorrhagia, against which they were administered, continues the same as before their use, or is even aggravated, and almost always requires us to suspend them, until the eruption has disappeared.

My honourable colleague, the late Dr. Cullerier, never convinced, as I was, of the little confidence to be placed in the general and revulsive action of copaiba and cubebs, and certain that there must be something peculiar in the action of these agents on diseased mucous membranes, made experiments for several years, on their direct action, when applied in substance to the mucous membranes, by means of injections or otherwise; and contrary to the opinion advanced by some able experimenters, but who are a little too hasty in their conclusions, he found that the effect was inappreciable, or injurious. I will also add, in support of these experiments, that I have obtained no better result from the administration of copaiba and cubebs by the mouth in discharges reputed blennorrhagic from the lower portion of the rectum; and this could easily have been foreseen, since the effect must be very nearly the same as in the experiments of Dr. C., for a considerable quantity of these substances frequently passes through the digestive tube, without undergoing any alteration, and may thus be justly considered as applied locally to the diseased parts.

Hence we must rely on injections and appropriate local applications in the treatment of all varieties of blennorrhagia, other than urethral blennorrhagia; and in the latter we cure the sooner and the more readily, in proportion as we associate with the internal treatment suitably adapted to produce an action on the urinary passages, a local treatment, in which nitrate of silver should rank first.

I have also thought it interesting to add to the preceding observation, the two following recent cases, which I have communicated to the Academy of Medicine.

Blennorrhagia in a urethra divided in its middle portion, in front of the peno-scrotal angle.—P——, aged 24, entered the Hôpital du Midi, Feb. 2d, 1849.

When seven years old, this patient took the singular fancy to stop his water, by strangulating his yard with a tightly drawn cord: the cord was removed at the end of several hours, but the constriction had lasted long enough to deeply mortify the tissues, including the urethra, and to occasion the lesion, which we proceed to describe.

At the junction of the posterior with the middle third of the penis, there exists a circular constriction, the result of compression of this organ. At this point, the skin presents a circular, furrowed cicatrix, about two lines in depth; the portion of the yard anterior to the constriction has attained its normal development. The urethral canal, opened in front of this constriction, presents a clearly defined circular orifice, through which a grooved

sound can be introduced. Posteriorly to the cicatrix, the second portion of the urethra opens by a more everted, uneven orifice than the preceding, has a very irregular border, and is capable of admitting a catheter of ordinary calibre. All the urine comes out of this opening.

Erections are nearly the same as in the normal state. A month ago, P—— contracted an acute gonorrhœa, which had not been treated until the day of his admission to the hospital.

On entering the Hôpital du Midi, the disease occupied the two portions of the canal; the abundant discharge was of a greenish yellow colour: the posterior portion of the canal was the seat of tolerably acute pain during and after the emission of urine; at night there were erections, attended with scarcely any pain.

Feb. 2d. The patient is ordered an emulsion of copaiba. In order to appreciate exactly the effect of the remedy on each part of the canal, I carefully plug up with diachylon the orifice in front of the stricture, though it is almost a superfluous precaution, since all the urine comes out of the posterior opening: then the urine charged with the medicinal element will affect only that portion of the urethra, which is behind the solution of continuity.

Feb. 6th. The discharge has much diminished, and changed its colour in this portion; pressure of the fingers produces a drop of whitish muco-pus, suspended in a clear adhesive fluid; the pain has ceased.

Feb. 8th. The discharge has completely disappeared in the posterior portion; I now direct the patient, who continues the use of the copaiba, the moment he has passed his urine, to inject it from behind forwards (through the artificial opening) into the anterior portion, which has undergone no modification.

Feb. 12th. There is already a marked improvement: the nature of the discharge has changed; it is of a yellowish white colour and much less abundant.

Feb. 15th. The quantity and colour of the discharge are still further modified; three quarters of an hour after injecting, on squeezing the canal, we obtain with difficulty a drop of very clear muco-pus, at the orifice of the natural meatus.

Feb. 16th. The discharge is cured throughout the whole canal.

I met with the second case in my private practice.

Accidental hypospadias; Blennorrhagia cured successively in the two portions of the canal.—M—— was affected at the same time with a blennorrhagia, and a rupture of the urethra, which had produced an accidental hypospadias in the middle portion of the yard. As in the preceding observation, the mortification of the tissues, and consequent rupture of the urethra, was the result of constriction exercised by a cord; it was at the same age, of seven years, that the patient inflicted on himself this injury.

The urine escaped by the artificial meatus, but the patient could make it pass through the whole length of the canal, by applying the anterior portion of the yard to the posterior, and maintaining the longitudinal axis of the organ, so as to stop up the traumatic orifice. Copaiba was given internally: the blennorrhagia stopped in a few days in the posterior part of the urethra, but continued in the anterior part, through which the urine charged with the medicinal element of the copaiba was not allowed to run.

No change was made in the treatment, however, for three days. The cure of the posterior part of the urethra being then perfectly established, the internal administration of the copaiba was continued, but now the patient made the urine run through the whole extent of the urethra, by tak-

ing the precaution above indicated; by this method, the copaiba-bearing fluid cured the anterior portion of the canal, but in double the time which was required for the cure of the posterior part.

My learned colleague, Dr. Hardy, has presented to the Society of Physicians of the Hospitals of Paris, cases of cure of vaginal blennorrhagia, by injections into the vagina, of urine charged with copaiba. I have myself thus succeeded in some cases of balanitis.

But when I have endeavoured to mix the copaiba with the urine after its emission, and then inject it, I have always failed.

I have instituted some researches, not yet completed, to ascertain if the medicated urine, prepared by the kidneys, could not be imitated, but I have as yet attained no very satisfactory result.

In the cold and wet weather of spring and autumn, copaiba often determines cutaneous eruptions, which, in order of frequency, come under roseola, urticaria, or simple erythema. These eruptions appear especially, when the digestivė organs are disordered. They are generally attended with severe itching, and rarely last beyond a week, when, recognizing the cause to which they are due, we suspend the treatment. This action of copaiba upon the skin, while it torments the patient, not only has no beneficial action on the blennorrhagia, but it is not uncommon to see patients, in whom the running, after being dried up, reappears as soon as a cutaneous eruption shows itself. After these practical observations, which may be repeated every day, we must beware of adopting the opinion, recently advanced in the *Dictionary of practical medicine and surgery*, which states that the action of copaiba on the skin, is not a contra-indication to its use.

I cannot speak of the action of copaiba on the skin, without pointing out a serious mistake made by M. A. Cazenave in his *Traité des Syphilides*. This pathologist considers the exanthemata produced by copaiba and cubebs, as true syphilitic symptoms, from the sole fact that a blennorrhagia has preceded. But, for what are these remedies given? And is the existence of a blennorrhagia necessary that they should produce such effects?

The rarest of all the effects of copaiba is doubtless its action upon the nervous centres. And yet I have had the opportunity of observing patients, in whom excessive doses of this drug, or its untimely administration, produced alarming symptoms of congestion, and excitation of the spinal marrow and brain. In the case of a woman, it caused a temporary hemiplegia, which disappeared so soon as a lively rubeolar eruption showed itself; whilst, in another female, its employment was followed by violent convulsions, whose crisis was also an acute exanthema.

Copaiba is applied locally by means of dressings, injections, or suppositories. It is given internally by the stomach or rectum.

Its direct application is without effect or injurious. Its best mode of administration is by the stomach: it is ten times more powerful, when given this way, than by the rectum, and it should be given by the large intestine only when the stomach cannot tolerate it.

The purer and more free from adulteration copaiba is, the better it

acts. All the pharmaceutical preparations, whose object is to solidify it, and remove its taste or smell, often impair its efficacy.

The stomach may be made to bear it, by combining it with antispasmodics, opiates, tonics, &c. Acidulated drinks succeed very well for this purpose; as lemonade and seltzer water.

The capsules, in which it is now given, constitute a true advance in pharmacy.

When copaiba purges too powerfully, without good result, it must be combined with astringents; or when it has the opposite effect, its action must be increased by purgatives. In the same manner also, when its action on the urinary passages is not decided enough, diuretics must be given as adjuvants.

It is given by the rectum, in small enemata, or in the form of a suppository. Some persons retain more easily capsules introduced into the intestine above the sphincter, as proposed by Dr. Rettier, the skilful collaborator with Cullerier.

We do not obtain the happiest results by commencing with minute doses. From one to three drachms, and even eight drachms and upwards, may be given daily, according to the patient's susceptibility. When copaiba has produced its effect, its use should not suddenly be suspended; we should finish off with decreasing doses.

After copaiba, and perhaps of equal importance as an antiblennorrhagic, we must rank cubebs. The latter is less nauseating than the former, but it is more irritating, and causes constipation more frequently than diarrhœa. It imparts much less odour to the urine, and its action on the skin is infinitely more rare.

Since it is cheaper and more easily obtained pure in commerce, it generally deserves the preference, regard being had, however, to some of its properties which we have just mentioned, and which often find their application.

The dose is from four to eight, or even fifteen drachms, a day. It may be given, like copaiba, with which it is often united, under many pharmaceutical forms: the most simple is in powder; the most agreeable and convenient is in capsules.

The turpentines, and especially Venice turpentine, are much less powerful, spite of what has been said of them latterly. Purgatives, at most, only serve to fulfil certain indications: the same is true of diuretics, on which we no longer rely, as Töde and his followers did. As to astringents, tonics and iodine, which MM. Ricord and Henry have so highly recommended; revulsives to the skin, blisters, cold baths, vapour baths, etc.; we should consider them only as purely accessory means of treatment, and of very little efficacy.

Since Hunter says nothing of balanitis, or external blennorrhagia, I may be allowed a few words on the subject.

The best treatment of this form of blennorrhagia consists in the superficial cauterisation of the affected part, by means of stick nitrate of silver: this is passed rapidly over the surface, so as to whiten it, without giving the caustic time to penetrate deeply. Having done this, if the gland can be uncovered, a pledget of dry lint is placed be-

tween it and the prepuce, and renewed twice a day. When the balanitis occurs without any erosions, simple lotions of lead water, and the interposition of dry lint, are sufficient. When there is more or less phimosis, cauterisation, by passing the lapis infernalis between the gland and its envelope, and afterwards injecting Goulard's extract, gives the happiest results. I generally use lotions or injections between the gland and the prepuce, twice a day, of the following:

℞. Aquæ destillat., ℥vj.
Argent. Nitrat., grs. xxx. M.

Where other applications, emollients, antiphlogistics, and reputed specifics, fail or prolong the disease, you obtain, by this means, the most rapid cure. More or less inflammation is not a counter-indication; only in cases of excessive inflammation, abstraction of blood may be added to the treatment; and it is only in cases of threatening gangrene, that we should operate for the acute phimosis, which may complicate balanitis.

In woman, blennorrhagia of the vulva is the most easily cured. It yields to the same means as balanitis. When the vagina is affected, the acute stage requires antiphlogistics, especially the use of emollient and sedative injections. But as soon as this stage subsides, or when the chronic stage precedes or follows it, the method, which has given me the most happy results, and which I was the first to notice favourably, though it has been copied by others, is the use of nitrate of silver in a solid or liquid form. In the first case, the parts are exposed by means of my bivalve speculum, and commencing with the deeper regions, the nitrate of silver is passed over the whole surface of the vaginal parietes as the instrument is withdrawn. After this application of caustic, the walls of the vagina are kept separated by dry charpie, as in the treatment of balanitis. This cauterisation is followed the day after, by resolvent or astringent injections, repeated three or four times a day. The application of the solid nitrate succeeds especially when the mucous follicles are strongly affected, in that form, which I have designated under the name of *psorélytrie*. It should be repeated after an interval of three or four days, if the disease remains in *statu quo*, or be abandoned, if the discharge is aggravated or dries up. In other cases it is sufficient to inject two or three times a day, a solution of crystallized nitrate of silver, containing fifteen or thirty grains to three ounces of distilled water.

In all cases, where injections are indicated, the action of the fluid is much more efficacious, when it is kept in contact with the diseased tissues by means of pledgets soaked in it. Moreover, isolating the walls of the vagina by the introduction of charpie or carded cotton is often successful.

When the disease has involved the uterus, the above means may still act through continuity or contiguity of tissue; but, it must be confessed, they are more frequently powerless. Much may be hoped, in this case, from cauterising the neck and its cavity by the introduction, with all necessary care, of a stick of nitrate of silver. Also, in-

jections, with a solution of this salt, may be made, of the strength that I have mentioned.

Nitrate of silver, suitably employed in these cases, causes no more unpleasant symptoms than any other method; and those who have blamed it, have badly read and observed, or imperfectly understood. Uterine injections, which M. Vidal invented about the same time as myself, produce, in some cases, very alarming nervous hysteric phenomena, which I pointed out in a memoir, in 1832.* They must therefore be employed with excessive caution; and perhaps it would always be preferable to insert the medicated liquids, by means of a small sponge, attached to a piece of whalebone.

What I said of the treatment of urethral blennorrhagia in the male, is true of the same disease in the female; and copaiba and cubebs are here again efficacious.

I will add only a few words to what Hunter says of the constitutional treatment of blennorrhagia, so far as regards mercury. It may be said that it is almost always injurious, employed as a constitutional remedy, and *a fortiori,* injurious as a local application. The half treatment of M. Lagneau is not rational, and recourse should be had to this class of remedies, only when other indications present themselves, and demand constitutional remedies, such as the co-existence of an indurated chancre, or a persistant engorgement, to which mercury may be locally applied as a resolvent.

ART. II.—*On the Pathology of Asphyxia.* By THOMAS JOHNSON, M. D., late Professor of Anatomy in the University of Virginia.

There is probably no term whose literal meaning conveys so little idea of the pathological conditions classed under it, as asphyxia. Syncope is accompanied by a cessation of pulse; yet there is a marked difference between the two affections, which is obvious to the most superficial observer.

Physiologists are agreed, that of all the injurious accumulations in the blood, that which takes place with the greatest rapidity, is carbon, or carbonic acid. To separate this noxious ingredient from the circulating mass, and to supply it with the vivifying principles of the atmosphere, is a work which must go on unceasingly. The largest gland in the body of vertebrata, though subservient to other important

* Mémoires de l'Académie de Médecine. Paris, 1833. T. II., p. 159.

functions, is also actively separating carbon from the blood, by throwing it into innocuous combinations, thereby assisting the pulmonary organs in no inconsiderable degree. But it is evident, any circumstance which interrupts the entrance of the atmospheric air into the lungs, increases the carbon in the blood; at the same time, this vital fluid, by the exclusion of oxygen, is deprived of a stimulus essential to the vital actions of the general tissues. If there is not a due balance kept up by a normal respiration, between that act and circulation, animal heat, nutrition, secretion, absorption, inervation, in a word, every vital action, feels the influence.

There are two general causes of asphyxia; the first, mechanical, comprehending such agents as prevent the aëriform medium in which we live from entering the air-cells of the lungs; and the second, chemical, including those gases which are destructive of the respiratory act, whether from the deficiency of oxygen in their composition, or from their positively deleterious properties.

It is a well established fact, that reptiles and the invertebrata, as well as hybernating mammals, require less oxygen to support life than the birds and the mammalia in general. The cetacea, though mammals, are enabled to remain under water for an hour or more, because their arteries and veins lie in contact with large diverticula, filled with red blood, which is absorbed and taken into the circulation from these reservoirs during submersion. The respiratory function in man ceases in less than five minutes after the complete exclusion of atmospheric air, and the circulation in less than ten minutes; but habit may prolong this period, as is incontestibly proven by the Ceylon pearl divers. Reanimation of still-born infants has been known to take place half an hour after the resuscitating means were resorted to.*

Too frequent respiration of the same air as surely produces asphyxia as the breathing of carbonic acid, though not so quickly. The horrors of the Black Hole of Calcutta, in 1756, must be familiar to every one, where 146 persons were confined for a night, in a badly ventilated room, only 18 feet square. The next morning, only 23 of the prisoners were

* Twelve years ago, I attended a negro woman, who was delivered of twins. The last child was still-born, and I tried fifteen or twenty minutes to resuscitate him, unsuccessfully. An old negress then applied her mouth to the child's, I holding his nose, and at regular intervals pressing the abdomen and thorax, so as to imitate the respiratory action of these parts. In five minutes the child cried lustily!

For interesting cases of this kind, and those from drowning, see Marc, *Manuel d'Autopsie Cadavérique Médico-Légale*, p. 152, et seq.

alive, and it is said, (mark the observation,) most of these subsequently perished of "putrid fever."

Whether what are termed *Zymotic* diseases (ζιμοω, to ferment) depend in reality upon a fermentable material in the blood or not, may be disputed; but certain it is, that an inferior degree of pulmonary and cutaneous exhalation is a most potent predisposing cause of choleriform and typhoid affections. When air is confined and frequently respired, it becomes loaded with carbonic acid and putrescent exhalations from the body, and is finally offensive to the smell. How can we doubt that such an atmosphere is a cause of zymotic diseases? Whilst complete oxidation of effete matters eliminates them in the form of carbonic acid and water, leaving urea and other highly oxidized products to pass off by the kidneys, an imperfect oxidation will convert them into peculiarly offensive products, such as those which characterize fœcal excretions and imperfectly formed bile.*

The reports of boards of health uniformly attribute the spread of zymotic diseases to overcrowding and insufficient ventilation. We observe the prevalence of these affections in prisons, in ships, in camps, poor-houses, factories, &c. It is in such situations that cholera asphyxia and typhoid fever rage with the most terrible malignancy. The same effect is observed when the atmosphere is contaminated by the evolution of carburetted hydrogen from marshy soils. The history of the cholera at Kurrachee in Scinde, where an army of 6380 men was decimated in an incredibly short space of time, strongly confirms this view.† Watchfulness, the influence of warm climates, and prolonged muscular exertions, by well known physiological laws, cause not only imperfect aëration of the blood, but the most noxious cutaneous exhalations.

From these considerations it will appear that the subject of deficiency of proper respiratory material is of the deepest hygienic interest to the public generally as well as to the pathologist.

Asiatic cholera has been most appropriately termed cholera asphyxia, for partial asphyxia is a most prominent and invariable symptom of the disease. The blood drawn from the vein of a cholera patient is dark, thick, and grumous; and the arterial blood is as black as ordinary venous blood. This is precisely the condition of the blood in asphyxia from submersion or strangulation. It is to be remembered

* Carpenter. *Principles of Physiology*, p. 539.

† See *British and Foreign Medico-chirurgical Review.*

that the functions of the liver, a powerful decarbonizing organ, are immediately suspended in severe cases of cholera.

The phenomena of asphyxia can be best observed where they gradually occur, as in the partial obstruction of the air-passages, produced by pneumonia and similar affections; for, where they succeed each other rapidly, as in strangulation, they do not admit of accurate observation. Dr. Carpenter very properly divides them into three stages or degrees. The first commences with an increase of the *besoin de respirer*, which may increase to a most distressing extent. Involuntary and most powerful efforts of the respiratory muscles respond to the wants of the system, and if aëration does not occur, the agony becomes intense, succeeded by vertigo and insensibility.

When this insensibility is complete, the respiratory movements become irregular and convulsive, the countenance is livid, the nostrils dilate, the lips are of a deep purple, the veins turgid, and the eyes seem starting from their sockets. This is the second stage. The pulse at the wrist is now almost extinct, and the heart pulsates languidly. Soon the animal functions are suspended; no muscular movements are observed, and the sphincters begin to relax.

In the third stage, the irritability of the voluntary muscles is gone, the individual falls powerless to the ground, but still the heart contracts feebly, though unable to force the blood into the systemic arteries. The general surface now becomes livid; a characteristic violet hue of the hands and feet is observed; purple spots appear upon other parts of the surface; cadaveric rigidity takes place tardily after the organic functions have been entirely suspended.

It is an indisputable fact, that the change from venous to arterial blood, is effected in the pulmonary capillaries, and there the sagacity of Haller fixed the seat of asphyxiation, though he was probably wrong in supposing the stagnation to depend merely upon a mechanical impediment to the motion of the lungs. If an animal is asphyxiated by breathing the irrespirable gases, the air-cells remain open, and there is no direct obstruction to the free flow of blood through the pulmonary structure; yet, here we observe nearly the same phenomena as if it had been submerged or strangulated. Nor does death, under the circumstances of asphyxia, proceed from the want of the arterial stimulus in the left side of the heart; for Bichât has experimentally proven that the presence of venous blood, is sufficient to keep up the action of both sides of the heart: besides, the facts connected with hyber-

nating animals, whose blood is almost purely venous, during hybernation, is opposed to such a theory. Bichât ascribed the cessation of the circulation to diminished irritability of the heart, resulting from the deleterious effect of venous blood upon its vital properties, an effect which he proved this fluid to exert on the excitability of the nervous system.* That the circulation of venous blood upon the nervous centres, acts powerfully in arresting the circulation, I cannot doubt, notwithstanding the experiments of Dr. Kay prove that the circulation of venous blood through the muscles is not destructive of *their* irritability.† But it must be borne in mind, that an interruption of the chemical changes, or aëration in the pulmonary capillaries, is the primary cause which leads to the stagnation or engorgement in these capillaries; hence, if these chemical agents be renewed before organic life becomes extinct, the vital actions may be renewed in the organism. The right side of the heart, according to all observation, in cases of asphyxia, will soon cease to act from over-distension of venous blood which accumulates in it; whereas, the left side speedily ceases to act from a deficiency of blood, the pulmonary veins having ceased to afford a supply to it. These opposite conditions of the heart, are always found to exist where death has resulted from slow asphyxia.

All injuries and diseases which terminate in coma, occasion death by asphyxia, a principle which leads to important practical results; for, if there be no organic lesion of the nervous centres, and the stupor is temporary, life may be preserved by a long-continued artificial respiration. In cases of narcotic poisons, and convulsions in children, this practice has been followed by successful results, and as Sir Benjamin Brodie remarks, is now one of the established facts of our profession. Observation of the progress of the symptoms of typhoid fevers, induces me to believe, that the coma and organic lesions of the brain, which are developed in their course, is the result of partial asphyxiation; for, where post mortem examinations show lesion of the brain, or its meninges, dyspnœa has been a prominent symptom of the case, and has uniformly preceded cerebral disturbance.

Strangulation, as every one knows, is a violent compression of the

* See Carpenter, Legallios and Bichât.

† See *Recherches sur le retablissement de l'irritabilité musculaire*, by Dr. Brown-Séquard. It is there proven, from experiments on criminals, that muscles affected with cadaveric rigidity, regain their irritability upon the injection of venous blood into their vessels.—[Ed.

neck by a ligature, or other means, and whether it be by suspension, the garotte, or otherwise, the impediment to respiration may be partial or complete. If the ligature is only applied to the trachea, death occurs from asphyxia; but if the jugular veins be compressed, cerebral congestion or apoplexy ensues. Any one who will reflect upon the functions of the parts involved, and the nature of the mechanical application, must be convinced that in strangulation, both of these conditions usually occur together. Casper observed that in 106 cases of strangulation, apoplexy took place in nine; asphyxia alone in fourteen; both conditions, in sixty-two; that in five cases neither occurred; while the remaining sixteen cases were not examined.

A vulgar prejudice exists, that hanging by the neck often produces dislocation or fracture of the cervical vertebræ. It is remarkable that neither Casper, Remer,* or Fleischmann, mention any such occurrence. When we consider the anatomical structure of the neck, and reflect upon the number and strength of the muscles and ligaments which firmly bind the cervical vertebræ together, we would naturally infer dislocation or fracture to be a very rare accident in death by suspension. Although I have had some opportunities for examination of cases of death from suspension, I have never seen either of the conditions just referred to.†

In death by submersion, water is often found in the air-passages of the lungs, acting as a mechanical obstruction, and affording a greater or less impediment to the entrance of air to the cellular tissue of these organs; but this cannot properly be considered a proximate cause of death, for, frequently, autopsies show this condition to be absent, and it would require a considerable quantity of fluid to entirely impede the pulmonary circulation, in the manner described by Dr. Southwood Smith. Nor does the partial collapse of the lungs, so much insisted upon by some authorities, even when it exists, account for the rapid death which supervenes upon complete immersion.

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* *Annales d'Hygiène.*

† Persons who have been recovered from attempts at strangulation, suppose it to be a very easy mode of death. The symptoms which precede insensibility are, according to such testimony, rather pleasurable (!) than painful. A lady, who tried the trick of suspending herself by the neck from a bed-tester, says, the first sensations are very much like those produced by taking chloroform. In her case, she experienced a brief vertigo, some pain on the top of the head, pain of the epigastrium, tironitus aurium, and flashes of light before the eyes; all of which were soon relieved by complete insensibility.

One of the consequences of asphyxia, (though, as we have already shown, by no means a primary one,) is congestion of the cerebral veins. This occurrence is pretty uniform in death by drowning, but it cannot be regarded the proximate cause of death, inasmuch as it is only one of the consequences of that stagnation of blood in the lungs, which affects so injuriously all the vital offices of the system. However, that death is sometimes produced exclusively by cerebral congestion, in cases of submersion, I am not disposed to deny.

The principal cause of death in the greater number of cases of submersion, is from a true asphyxia, induced by the supply of atmospheric air being cut off from the lungs, thus preventing the aëration of the blood in the air-cells of those organs. In the act of drowning, most of the atmospheric air is expelled from the lungs before final sinking under the water, especially if that medium be cold, but still some air remains in the air-cells and bronchi. This soon becomes contaminated and is rendered unfit for respiration by the evolution of the deleterious carbonic acid gas.

In simple asphyxia, rapidly induced, the general lividity of the body is quite characteristic; though it may be absent in cases of drowning. When the patient has been strangled, deep livid spots, resembling ecchymosis, are usually observed upon the face, neck and upper part of the chest. The face has a distressed expression, the eyes are prominent and the pupils dilated. The right side of the heart and the great veins are congested with a semi-fluid black blood, whilst the left side is comparatively empty. The large organs, as the spleen and liver, are engorged with venous blood, and so are the mucous membranes, which sometimes exhibit ecchymoses. This pseudo-morbid appearance on the mucous surface of the stomach of a subject recently hanged, was mistaken by Yellowby for the characters of inflammation, and this case has been, singularly enough, appealed to, by the opponents of Broussais, as a refutation of his doctrines of gastritis. To the practised eye, ecchymosis no more resembles inflammation than it does mortification.

The brain, the root of the tongue, the mucous membrane of the bronchi, and the lungs, are discoloured by venous turgescence. The lungs themselves, says Carpenter, in his admirable Essay on Asphyxia, if not previously diseased, are generally distended, and expand so as to meet over the pericardium. When exposed to view, they present a dark brown, sometimes almost blackish hue externally; but

their parenchyma exhibits a redder tint when cut into. The engorgement is here in the pulmonic arterial system; but it is occasioned by the accumulation of venous or black blood, of which, large, dark, thick drops flow out when incisions are made in the substance, and slight pressure employed.

The anatomical characters of strangulation by hanging have been well summed up by Taylor, (*Medical Jurisprudence*, vol. 1, p. 165.) These are lividity and swelling of the face, especially of the lips, which appear distorted. The eyelids are swollen and of a bluish colour; the eyes red, projecting forwards, and sometimes forced out of the orbitar cavities; the tongue enlarged, livid, and compressed between the teeth, and frequently protruded. A sanguineous froth about the lips and nostrils. A deep and ecchymosed impression around the neck, indicating the course of the cord, the skin sometimes being excoriated; laceration of the muscles and ligaments of the hyoideal region; laceration or contusion of the larynx, or upper part of the trachea. There are, commonly, circumscribed ecchymosed patches, varying in extent, about the upper part of the trunk, with deep livid discoloration of the hands and feet, and a violet tint of the nails. The fingers are generally much contracted, or firmly clenched. The urine, the fæces, and seminal fluid are sometimes involuntarily expelled at the moment of death. The body is, *cæteris paribus*, a much longer time than usual in parting with its heat. Most of these signs are observed on the bodies of persons who have been hanged, but it is remarkable how many of them may be absent.* The countenance of suicides frequently presents the traits of the most undisturbed placidity, whilst the countenance of criminals, who have been executed, or of persons who have been murdered, exhibits great distress or even distortion.

> "But, see, his face is black, and full of blood;
> His eyeballs farther out than when he lived,
> Staring full ghastly like a strangled man:
> His hair uprear'd, his nostrils stretched out with struggling;
> His hands abroad displayed, as one that gasp'd
> And tugg'd for life, and was by strength subdued."
>
> (*Henry VI., Pt. II., Act 3, Scene 2.*)

In cases of submersion, where simple asphyxia has been the result, the face is either pale, or a slight livid tint is observed; but the hands

* See a remarkable case of suicide related by Esquirol, *Maladies Mentales*, Tome II, p. 844.—[Ed.

and feet are usually discoloured. As Carpenter remarks, "the appearance of the surface will greatly depend upon the duration of the immersion, and upon the length of time during which the body has been subsequently exposed to the air." The pupils are dilated, and the eyelids half open; a mucous froth about the mouth and nostrils; the tongue pushed forward against the teeth. The bronchial mucous surface is generally injected, but the air-passages do not usually contain more than a spoonful of water. The lungs are gorged with black fluid blood. If the body has been long immersed, the stomach becomes filled with water.

When syncope has been the cause of death, in drowning, the surface is pale and almost in a natural condition. The trachea sometimes contains a little water, but no froth; the lungs are sometimes collapsed, but never preternaturally distended. The brain is seldom apoplectic, though there may be some cerebral engorgement.

It is scarcely necessary to observe, that the first thing to be done in the treatment of asphyxia, is to remove the cause, since, if it continues to exist, all efforts at relief must be unavailing. When the respiratory function has not entirely ceased, the patient, usually, is easily restored by free exposure to the air, and keeping the surface of the body moderately warm; but where these have been suspended, more energetic measures must be resorted to. As artificial respiration is the most powerful means for the restoration of suspended animation, it must be employed without delay. The chest and abdomen should be compressed so as to diminish the cavity of the thorax, thereby expelling as much as possible the contents of the air passages, and then the thorax is allowed to regain its natural size by its own elasticity. This should be repeated 15 or 20 times a minute. Whilst this process is in operation, the lungs should be inflated to aërate the blood which has become stagnant in the pulmonary capillaries.

In addition to artificial respiration, stimulating agents are to be employed. Artificial heat, not exceeding 98°, should be applied to the surface of the body. The warm bath and warm applications to the epigastrium are of great importance, especially after submersion, in restoring the natural temperature of the body. Frictions with warm flannel and rubefacients will be found useful, after the warm bath. Moderately stimulating fluids may be injected into the stomach or rectum with advantage. Electric shocks through the region of the heart

has been known to excite it to action, even after the case has been abandoned as hopeless. (See Dr. Ure's interesting cases, in the Glasgow Med. Jour.)

Where the jugular veins are much distended, they should be emptied by an incision with a lancet, thereby relieving the brain and heart of an oppressive engorgement. However, this remedy should be applied with great caution, for reasons which must be obvious to every practitioner.

The consideration of asphyxia in relation to hygiene and medico-legal questions is of great importance, but as these are extensive subjects, I purpose recurring to them at a future period.

ART. III.—*The Therapeutic value of Veratrum Viride.* By W. C. NORWOOD, M. D., of Abbeville, South Carolina.

We know of no agent so peculiarly adapted and so universally applicable to the treatment of febrile and inflammatory affections, as the American Hellebore. With limited exceptions it fulfils the therapeutical indications in these diseases unaided and alone; and, withal, its results are so invariable that we may expect to realize its effects, when properly administered, with the same certainty with which the husbandman anticipates an abundant harvest from the proper culture of his field.

However numerous or diversified may be the causes of febrile and inflammatory diseases, certain uniform effects or events are sure to follow them, and to correct or modify these effects is the grand aim of the practitioner. To do this successfully, a practical and experimental knowledge of the therapeutical properties of the agents calculated to modify the actions excited by these causes, is necessary; and this is the reason of my pressing so earnestly on every one, the importance of thoroughly testing, and closely watching for himself, the therapeutical effects of veratrum viride; for I believe that he who fully understands its powers and applications, is in possession of the key which opens the door to triumphant success in the treatment of many diseases hitherto considered the opprobria of medicine.

I have been charged with enthusiasm, extravagance, and fancy, in estimating the value of this remedy, and in urging its claims upon the profession; but years of close observation and experience have convinced me that, far from exaggerating, I have failed to do justice to the subject. Who can overrate the value of an agent capable of controlling the actions of the heart with demonstrative certainty? When it was announced, by the Italian physicians, that digitalis possessed the property of subduing and controlling morbid vascular action, medical men ardently anticipated the benefits that were about to be realized. But it proved not to possess the powers ascribed to it, and the field was again open for research and enquiry. After long observation and repeated experiment we are able to affirm, in the most positive manner, that *veratrum viride* entirely fulfils this indication. In less than 24 hours it will reduce a pulse of one hundred, or one hundred and sixty, to between thirty-five and eighty-five beats in the minute.

But this drug possesses other important remedial powers. It is a certain and efficacious emetic; it possesses expectorant and diaphoretic properties in an eminent degree: its adanagic power is considerable, and it acts as a nervine in allaying morbid irritability.

We trust that these statements, based upon careful clinical observation and mature reflection, will induce the profession to use this remedy, and we believe that the benefits resulting to the sick from its judicious employment will be incalculable.*

* Dr. Norwood publishes (*Charleston Medical Journal*, November 1852,) his formula for preparing a saturated tincture of the root of veratrum viride:— ℞. Of the dried root of veratrum viride, ℥ viij; of alcohol of the shops, ℥ xvj. Digest for a fortnight. The dose for an adult is eight drops, to be given every three hours.—[Ed.

CHRONICLE OF MEDICAL SCIENCE.*

The translations and abstracts under this head, are made expressly for this Journal.

MEDICAL PATHOLOGY AND THERAPEUTICS.

1. *On the protection against smallpox afforded by vaccination.* By T. GRAHAM BALFOUR, M. D., Surgeon to the Royal Military Asylum, Chelsea.

[A paper on this subject was read to the Medico-Chirurgical Society of London, June 8th, 1852. After referring to the national importance of the question, and the difficulties arising in its investigation from the impossibility of ascertaining what proportion of the general population is unprotected by vaccination, or by a previous attack of smallpox, the author presented the following statistical evidence, founded on the returns of the Army, the Navy, and the Royal Military Asylum.]

"1. *Of the Army.*—There are no returns which show the actual number of soldiers who have been vaccinated or had smallpox, but a tolerably accurate approximation may be obtained in the following manner:

From returns forwarded annually to the Army Medical Board, it appears that, in the eight years from the 1st of April, 1844, to the 31st of March, 1851, inclusive, out of 90,092 recruits medically inspected at the head quarters of recruiting districts, and found fit for service, 20,132 bore marks of smallpox; 64,096 had marks of vaccination; and 5864 bore no distinct traces of either. By the rules of the service, the last class would undergo vaccination immediately on joining their regiments, and consequently must be added to the number protected by vaccination; making a total of 69,960, or 78 per cent. of the whole, while 22 per cent. had previously been protected by small pox. These proportions having been ascertained from such extensive data, may fairly be held to represent the condition of the army as regards protection from this disease.

The question now arises, what has been the number of admissions into hospital and deaths by smallpox among a body of men thus protected? In Abstract No. 1, of Appendix, this information will be

*NOTE.—Editorial comments are enclosed in brackets, [ ]. When a simple abstract or condensation is furnished, the name of the source from which it is derived appears in parenthesis.

found, as regards the troops at home for a period of ten years, and in the colonies, of thirty years.

The following summary gives a condensed view of the results:

Among Troops serving in	Aggregate Strength.	Cases of Smallpox.	Deaths by Smallpox.	Annual ratio per 1000 of strength.	
				Cases.	Deaths.
The United Kingdom, -	254,597	557	56	2·188	·220
Temperate Colonies, -	557,112	160	29	·287	·052
Tropical Colonies, -	314,131	28	8	·089	·025
Total, -	1,125,840	745	93	·662	·083

This Table shows the proportion of cases to have been only 66, and the deaths 8 in every 100,000 men serving throughout the army. But the prevalence and mortality have varied in different portions of the force. Thus, the deaths have been four times as numerous among troops in the United Kingdom as in temperate colonies, and eight times as numerous as in tropical colonies; while a still greater disproportion is found to exist in the admissions into hospital.

The comparatively large amount of smallpox among troops at home is, doubtless, attributable to the men being chiefly quartered in the large towns from which it is scarcely ever absent, and also to the number of recruits who join their regiments after having been living in those densely peopled localities where they were most likely to be exposed to the contagion of that disease. This view is corroborated by the fact, that of the 56 deaths noted in the preceding Table, 9 occurred in London, 7 in Dublin, 6 in Glasgow, 5 in Cork, 3 in Manchester, and 2 each in Hull, Devonport, Bradford, Belfast, Newry, and Kilkenny, leaving only 14 for all the rest of the kingdom. Additional proof is afforded by the relative proportion occurring among young soldiers, to which we shall hereafter advert. Even taking the most unfavourable results, however, the mortality has only amounted to 2 in 10,000 of the force annually.

As the lower ratio of cases in the colonies may perhaps be attributed to the men being less frequently exposed to the contagion of the disease, it may not be out of place here to notice a few of the more striking instances in which, from the general prevalence of smallpox in the colony, they must have been so exposed. This is shown for the West Indies in the following Table:

	Black Troops.			White Troops.			Ratio per 1000 of mean strength.			
	Mean Strength.	Admitted into Hospital for Smallpox.	Died.	Mean Strength.	Admitted into Hospital for Smallpox.	Died.	Cases of Smallpox.		Deaths.	
							Black Troops.	White Troops.	Black Troops.	White Troops.
Trinidad, 1819, -	603	Not stated,	58	230	Not stated,	0	Not stated,	Not stated,	96·2	0
St. Lucias, 1819, -	613	ditto	33	131	ditto	0	ditto	ditto	53·8	0
Bahamas, 1829, -	751	65	12	19	0	0	86·5	0	16·	0

Thus, while smallpox in one instance literally decimated the black troops, not a single death occurred among the European soldiers quartered in the same garrison.

In Malta, smallpox prevailed as an epidemic from March 1830 till August 1831, and again in 1838. The mortality caused by it among the military and civil population, respectively, was as follows:

			Strength.	Deaths from Smallpox.	Annual ratio of Deaths per 1000 of strength.
March 1830, to August 1831,	18 months,	Civil Population,	101,962	1169	7·6*
		Military, - -	2,299	2	0·6*
April 1838, to March 1839,	12 months,	Civil Population,	105,456	686	6·5
		Military, - -	2,186	0	0·

While, therefore, the loss by smallpox among the civil population has, on the average of these two epidemics, amounted to 718 in 100,000, among the Military, who, as we have already shown, are a protected class, it has only been in the proportion of 35 out of the same numbers.

In Ceylon, 7874 cases and 2945 deaths by smallpox were recorded in 1819, in a population of about a million. In the same year only four cases, of which two proved fatal, occurred among 2863 European soldiers, being in the ratio of 1·58 admissions and 0·8 deaths per 1000 of the strength. Among the native troops, (chiefly Malays, Africans, and natives of the Peninsular of India,) a large proportion of whom were, owing to religious prejudices, unprotected by vaccination, 41 deaths occurred in a force of 4081, being 9·8 per 1000 of the strength.

The principal mortality by smallpox among the troops serving abroad was in Canada, where 23 of the deaths recorded in the preceding Table occurred. During the last ten years of the period over which the returns extend, almost all the cases were in Quebec, Montreal, and Kingston, where the disease prevailed to a very great extent among the civil population. Omitting this Command, the cases in the temperate colonies amounted only to 16·, and the deaths to 1·5 in every 100,000 men.

If the hypothesis be correct, that the protective power of vaccination becomes gradually weaker, and at length dies out, we should naturally expect to find the mortality by smallpox greater among the old soldiers. With a view to test this, we have traced the ages of the fatal cases occurring in the United Kingdom, and have also ascertained the numbers living at each age during the ten years, 1837—46, as follows:

* As the period included in this observation is a year and a half, it is of course necessary, in calculating the *annual* ratio of mortality, either to add one half to the strength, or to deduct one third from the deaths.

	Aggregate Strength at each age.	Died by Smallpox.	Ratio of Deaths per 1000 of strength.
Under 20, - -	43,833	15	·342
20 and under 25, - -	90,041	28	·311
25 " 30, - -	49,285	3	·061
30 " 35, - -	37,151	8	·2
35 " 40, - -	25,017	1	·0
40 and upwards, - -	9,270		
Not known, -	-	1	
	254,597	56	·220

Although, probably owing to the limited numbers, there is an irregularity in the progression, the general tendency to diminish with advancing age is very strongly marked.

The fact, established by the recruiting returns, that 6½ per cent. of the recruits are wholly unprotected, affords a melancholy proof of the neglect of vaccination among the lower orders in this country, especially as it may also be inferred that of the 22 per cent. who have distinct marks of having had smallpox, a very inconsiderable proportion could have been protected by previous vaccination.

2. *Of the Navy.*—We have no means of ascertaining the relative proportions of men bearing marks of vaccination and of previous smallpox in this force; but as it is a standing order that all men and boys entering the service who have not satisfactory marks of either, shall be immediately vaccinated, we may look upon them as a completely protected class. In Abstract No. II of Appendix will be found a detailed statement of the number of cases of smallpox in each of the Naval Commands, and of which the following is a summary:

	Aggregate Strength.	Cases of Smallpox.	Deaths by Smallpox.	Annual ratio per 1000 of strength.	
				Cases.	Deaths.
Home and "various" Force,	77,733	105	3	1·351	·038
Foreign Commands, -	285,637	312	33	1·093	·115
	363,375	417	36	1·148	·099

Thus, it appears that throughout the navy the cases of smallpox have averaged only 115 and the deaths 10 in every 100,000 men.

3. *Of The Royal Military Asylum.*—Since the opening of this institution, in 1803, for the reception of orphans of soldiers, the vaccination register appears to have been kept with great care, and shows in every instance whether a boy, on admission into the establishment, bore marks of smallpox or cowpox, or was subsequently vaccinated. Satisfactory evidence can therefore in this instance be obtained that they were all protected. The cases that occurred among them up to the 31st of December, 1851, were as follows:

Period.	Aggregate strength.	Cases of Smallpox.	Died.	Ratio per 1000 of strength.	
				Cases.	Deaths.
48 years, - -	31,700	39	4	1·231	0·126

Thus, in a population completely protected, either by smallpox or vaccination, the cases have averaged 123 and the deaths 12½ in every 100,000, being a still lower proportion than in the army serving in the United Kingdom.

But we are enabled from the records of the Asylum to obtain another description of proof of the efficacy of vaccination. Of 5774 boys taken on the strength of the establishment from its opening in August, 1803, to the 31st December last, 1950 are recorded as having marks of smallpox, 3636 marks of vaccination, and 188 no satisfactory mark of either. The last having been all vaccinated on admission, there were 1950 protected by previous smallpox, and 3824 by vaccination. Among these the cases of smallpox above recorded, were distributed as follows:

	No. over whom observations extend.	Of whom subsequently		Ratio per 1000.	
		Had Smallpox.	Died of Smallpox.	Cases.	Deaths.
Boys having marks of smallpox,	1950	12	4	6·15	2·05
" " vaccination,	3824	27	–	7·06	0·00

This table shows the protection afforded by vaccination against attacks of this disease, to be very little inferior to that afforded by previous smallpox; the difference in the prevalence among the two classes having been at the rate of only 9 cases in 10,000 boys, while it is remarkable that all the deaths were from secondary smallpox, not one having occurred among the vaccinated.

The preceding facts appear to afford most conclusive proof of the value of vaccination. The length of time and the number of persons over whom the observations extend are sufficient to warrant reliance being placed on the results. In the army it has been ascertained that four fifths of the persons entering it are protected by vaccination. The navy being manned from nearly the same class of the population may be inferred to be protected in the same proportion, and two thirds of the boys admitted into the Royal Military Asylum have borne satisfactory marks. In all of them the remainder were protected by previous attacks of smallpox. The cases of this disease among a population thus protected have been as follows:

Among every 100,000 Soldiers there have been 66 cases and 8 deaths.
" " Sailors " 105 " 5 "
" " Boys of the R. M. Asylum 123 " 12 "

These results are on the whole extremely satisfactory: it may be remarked that the class among whom the largest proportion of cases

and deaths occurred was that in which the greatest number was protected by previous smallpox; and, as before stated, that all the deaths in that class were of boys who had not been vaccinated.

The evidence now laid before the Society appears to have an important bearing on the proposition again to legalise inoculation. The additional chance of exemption from smallpox which would result from having undergone that disease would be very small. But to gain this slight advantage what are the risks we must run? Even if every person inoculated were previously vaccinated, it cannot be doubted that in some instances the engrafted disease would prove fatal. We should consequently reduce to a certainty that which at present is contingent on the chance of the individual being exposed to contagion. Again, while so large a proportion of the population is unprotected by vaccination, it appears most unjustifiable, for the very slight advantage to be gained from it, to legalise a practice which must to a certainty perpetuate and spread a loathsome and, in unprotected persons, a very fatal disease.

The results, however, not only point out what is inexpedient, but suggest what is advisable. They show the great exemption (not amounting, however, as was at one time anticipated, to absolute immunity,) enjoyed by persons who have undergone vaccination, and thus point out the means of reducing the prevalence and mortality of smallpox to a mere cypher. Why then should not vaccination be made compulsory? It is true such a measure might be objected to, as interfering with the liberty of the subject, but so, to a certain extent, do all measures relating to public health. The convenience and prejudices of the few must give way to the interest of the many. The law compels us to carry our drains into the main sewers, forbids us throw rubbish or carry any other nuisance into the streets, as was the custom of our forefathers, puts down or regulates with a high hand any trade supposed to be injurious to the health or admitted to be offensive to the senses of our neighbours, and even compels us in some instances to consume our smoke; why then should it not enforce a measure which must greatly reduce, if not altogether annihilate, one of the most loathsome diseases that flesh is heir to? Why should it not prevent the ignorant and the careless from remaining in a position calculated to spread death and misery not only through the neighbourhood in which they reside, but through the length and breadth of the land. In our Factory Acts the principle is recognised of protecting the young and helpless against an amount of labour likely to prove injurious to them, and it would only be an extension of the same humane principle to afford them protection against a malady of so fatal a character.

To our profession the task appears especially to belong of extending the benefits of one of the greatest discoveries ever made. By our personal exertions in promoting, each in his own sphere, the spread of vaccination, and by using our influence in every quarter, to impress upon Government the necessity for some such sanitary law, we shall best fulfil the highest and most important mission of our profession—the prevention of disease.

Abstract No. I.

Shewing the Admissions into Hospital, and Deaths by Smallpox, in the Army, for the following periods:

	Stations of the Troops.	Periods of Observation.	Aggregate Strength.	Admitted into Hospital for Smallpox.	Died of Smallpox.
	United Kingdom, Cavalry,	10 yrs., 1837-46,	54,374	52	2
	United Kingdom, Foot Guards,	do. do.	40,120	133	8
	United Kingdom, Infantry,	do. do.	160,103	372	46
Temperate Colonies.	Gibraltar,	29 yrs., 1818-46,	93,400	14	1
Temperate Colonies.	Malta,	30 " 1817-46,	61,998	30	3
Temperate Colonies.	Ionian Islands,	do. do.	96,494	6	1
Temperate Colonies.	Bermudas,	do. do.	22,945	1	
Temperate Colonies.	Nova Scotia and New Brunswick,	do. do.	73,248	12	1
Temperate Colonies.	Canada,	do. do.	154,736	96	23
Temperate Colonies.	Cape of Good Hope,	29 yrs., 1818-46,	54,291	1	
Tropical Colonies.	Windward and Leeward Command,	30 " 1817-46,	121,750	7	1
Tropical Colonies.	Jamaica,	do. do.	67,714	3	
Tropical Colonies.	Sierra Leone,	18 yrs., 1819-36,	1,843		
Tropical Colonies.	Mauritius,	29 " 1818-46,	47,848	4	
Tropical Colonies.	Ceylon,	30 " 1817-46,	58,397	12	7
Tropical Colonies.	Moelmyne,	10 " 1827-36,	6,818	2	
Tropical Colonies.	Madras—Europeans,	5 " 1834 38,	45,378	7	2
	Total,	- - -	1,161,457	752	95

Abstract No. II.

Showing the Number of Cases and Deaths by Smallpox, in the Navy, for the following periods:

Naval Commands.	Periods of Observation.	Aggregate Strength.	Cases of Smallpox.	Deaths by Smallpox.
Home Force,	14 yrs., 1830-43,	57,293	83	2
"Various" Force,*	do. do.	20,440	22	1
Mediterranean and Peninsular,	do. do.	135,014	161	10
West Indies and North America,	do. do.	49,047	22	3
Cape, and West Coast of Africa,	do. do.	24,761	57	10
East Indian,	do. do.	40,512	43	9
South American,	do. do.	36,303	29	1
Total,	- - -	363,370	417	36

* Under this term are included ships, which, "though reckoned on home service are employed occasionally abroad in various detached duties, ships employed in carrying troops, ships fitting out and paying off, and packets while in England."

2. *Of the Practice of Vaccination in England and France.* By M. BAYARD.

[There are few subjects which involve so deeply the interests of humanity as the question of the protective power of vaccination. Accordingly, since the discovery of Jenner, there is none which has more constantly occupied the Medical mind. It is well known that Dr. George Gregory published a paper just before his death, setting forth the convictions at which he had arrived from an experience of thirty years, in the London small-pox hospital, which succeeded in conveying the impression to many that Jenner's views were erroneous, and that his boasted prophylatic was not to be depended upon, except for a limited number of years. Others have followed Dr. Gregory, and have contributed still farther to diminish the public faith in the security afforded by vaccination. While we are firmly convinced that the innumerable cases of small-pox after vaccination, which we hear of, are due to the fact, that the true vaccine disease was never communicated in these cases, and while we believe that genuine vaccine inoculation is a protection for life against variolous contagion, yet we deem it our duty to publish all the reliable historical and statistical evidence on the subject. We are willing to allow the adversaries of vaccination to state all their objections, nothing doubting that, in the end, the truth of Jenner's hypothesis will be appreciated by all. In Italy and Prussia vaccination is already required by law; we trust that this measure will be adopted in other countries, and that the duty of enforcing it will be entrusted to persons capable of discriminating the true and spurious forms of vaccinia. While the government fails to do its duty, and the failures of vaccinators, who make no pretensions to medical science, are allowed to throw discredit on vaccination, we may expect that small-pox will continue its sad havoc. We proceed, now, to offer a condensation of the arguments of M. Bayard:]

I read in the *Encyclopédie Méthodique*, 1853, that, "Vaccination is the *only* and invaluable protection against variola; it is then to vaccination *alone* that we should have recourse as a prophylactic, and any physician of our day, who prevents parents from submitting their children to this practice, lacks either judgment or knowledge, or both the one and the other." The author goes on to exhort the authorities "to form a salutary alliance against this scourge; for, until vaccination is rendered obligatory by law, the disease will disfigure, mutilate, and destroy a multitude of individuals." Gregory, of London, will prove presently to this encyclopædist that his prophecy has been verified in spite of vaccination.

The third of August, 1851, at a meeting of the Academy, I heard the following statements, which were read, with great satisfaction, by the perpetual Secretary; he was speaking of the introduction of vaccination into Egypt, which, according to the report of Dr. Clot-Bey, "had done more for humanity than all the institutions of civilization, than all the efforts of medicine; that its success had repaired the losses occasioned by wars and pestilence; and that the valley of the Nile would

have enough inhabitants to cultivate its fertile fields. Here there is no room for discussion; these results are certain."

Happy Egypt! thought I, in hearing these marvels, you will enjoy once more the population which existed in the days of the Pharaohs! Nevertheless a thought crossed my mind; I had read in a book in which the subject is well discussed: "We should not think too highly of the influence of vaccination over the increase of the population, for the truth compels us to admit, that this increase of population commenced long before vaccination was dreamed of." (*Traité de vaccine*, 1833.)

Here are some more positive facts. During the murderous wars of the Revolution and the Empire, the increase of population was, according to Carnot, 29 in a thousand annually. According to the last census, and the report of M. de Persigny, this annual increase is now only 3 in a thousand, after fifty-two years of the practice of vaccination. Truly in this question we go from contradiction to contradiction.

In the work just cited, after mentioning that vaccination is obligatory in many places, the author adds: "There is but little difference in their necrology; yet it is incontestable that small-pox once caused about the tenth part of the whole number of deaths. What has become of this tenth part?"

The problem is worth solving; here is its solution. I offer it for the meditation of Dr. Clot-Bey and the Committee on Vaccination. I find in the *Gazette Médicale* of the 25th of last September, the following statistical details by M. Carnot. In 10,000 deaths at every age, and among both sexes, there were, at the close of the eighteenth century, 525 deaths between 20 and 30 years. (*Buffon. Histoire Naturelle.*)

In 1816, in 10,000 deaths,	- -	728 from 20 to 30 years.
From 1816 to 1819 (4 years)	- -	900 " " " "
" 1820 to 1829 (10 years)	- -	1,088 " " " "
" 1830 to 1839 (*Idem*)	- -	1,210 " " " "
" 1840 to 1849 (*Idem*)	- -	1,340 " " " "

(*Annuaire du bureau des longitudes.*)

The conclusion is that, since the general practice of vaccination, the mortality *has doubled.*

M. Carnot does not lack confidence in his calculations, for he says it is impossible to contradict them. Here, then, is the tenth part found again; or rather here is the tenth part lost between 20 and 30 years, in the period of life which is most fruitful and productive. But why is it lost during this period of hope, the advocates of vaccination ask me. I will reply: It is on account of the retrocession or displacement of variola; a displacement caused by the introduction of vaccination. M. Serres is right when he affirms that typhoid fever becomes more and more frequent. Observation, in the provinces, proves to him, "that it is widely propagated; that it extends with frightful rapidity; so that at present we have to do with a *typhoid constitution.* (*Ancelon, de Dieuze, Fièvres typhoïdes.*) This honourable physician, who cares

very little that he is treated as a heretic, (heretics like him possess great talent; they are no longer burned; they have found a remedy for academic martyrdom in the journals of medicine,) publishes the following with all the assurance possible.

"The partizans of the discovery of Jenner forget the action of providential laws upon population; these demand a compensation for all that men undertake in opposition to their mysterious means of destruction. Is it not true then that the development of typhoid fever progresses in an inverse ratio to that of the small-pox? . . . It is much to be feared that here, as in so many other circumstances, human ingenuity and prudence has been completely baffled. (*Id. Fièvres typhoïdes*, p. 13, 1847.)"

The perpetual Secretary,* who approves and paraphrases the reports on vaccination, has said, "Boyer paid his tribute to the great city; he was attacked by that grave European endemic then called putrid fever, which we now call typhoid fever." (*Gazette des Hôpitaux*, Dec. 16, 1852.) Let us give this its true signification and its whole signification. Let us translate it then:

"Typhoid fever is not a new disease; it was called putrid fever antecedent to vaccination, and was then as frequent as it is now. The name only is changed; vaccination has no connection with it."

This is our reply: The putrid fever of Stoll is identical with our typhoid fever. In the time of Stoll and Boyer it was common in great cities. (This is what the perpetual Secretary calls *paying tribute.*) But it was *rare* in the country. It is now very common in cities, it is *very common* in the country. Lastly, "intestinal affections which were once of little danger to youth, have acquired, since 1821, an excessive gravity." (*H. Carnot.*)

I leave the perpetual Secretary and Dr. Clot-Bey to the satisfaction they experience in regard to the benefits, which they believe the latter has rendered to the Egyptians. After half a century of experience, his successors will observe whether those whom he has vaccinated, are capable of undergoing the fatigues of war as their fathers did.

In France vaccination is lauded in prose, sung in verse, and paid in gold. The Academy of Medicine is charged with its propagation; a special committee addresses an annual report of its progress to the minister, and distributes prizes and medals and all the rewards of a budget of 500,000 francs. Since its introduction it has cost twenty-five millions. The government renders it obligatory on all children who attend the schools. Inoculation is not prohibited, but the physician who dares inoculate, or proposes a return to this practice, incurs academic censure. He is signalized to the minister, as some unknown doctor, who denies the sound doctrines, to sink into heresy and apostacy. This discovery can only tolerate admirers. To speak one's opinion aloud, to oppose it, requires courage, as is proved by the following fact.

* M. F. Dubois (d'Amiens.)—[Ed.

The 25th of September, 1849, a learned academician, a profound writer, Dr. Castel, who had long been a zealous member and reporter of the committee of vaccination, rose, and with that regret which a physician, celebrated in honourable debate, experiences in entering the lists in which he will encounter his friends, he said: "I have long hesitated before making a communication to the Academy, which will excite great opposition. I meet these to accomplish a duty I owe to humanity." The orator then developed his thesis, and concluded in these words. "The depuration effected by variola responds to the necessities of the economy; the depuration of vaccinia does not satisfy these conditions." The voice which challenged attack was still vibrating; it met with no reply; no one there dared to take up the glove; only, two years afterward, when this old man was no longer able to be present at the academic sessions, they said there one day, with emphasis: "No medical voice is now raised in opposition to vaccination."

While matters are in this state in France, in England inoculation is prohibited, and a special hospital is established in London, so that all variolous contagion being prevented, the scourge, as the authors of the Dictionary of Practical Medicine say, shall completely disappear. We shall soon see what have been the results of these precautions. The two nations display the same enthusiasm and zeal. The one generoulsy rewards Jenner, the other claims the glory of the discovery for Rabaud-Ponmier. The first prohibits inoculation, the second renders vaccination obligatory. Thus, a unanimity of effort, a community of sentiment, until 1852. But, from the commencement of this year, we find a diversity in the appreciations of the effects of vaccination.

The truth has appeared from one of those very measures by which they sought to annihilate the germ of variola—the small-pox hospital. This is the manner in which Dr. George Gregory, physician to that hospital, expressed himself on the 9th March 1852. "The idea of extirpating the small-pox by means of vaccination is absurd and chimerical, and on the part of Jenner was as inconsiderate as presumptuous. . . . Small-pox undoubtedly attacks those who have been vaccinated. . . . During eleven years, 4091 individuals attacked by small-pox were admitted into the hospital; 2167 of these had been previously vaccinated. . . . During 1850 and 1851, of 751 adults, almost all of whom had been vaccinated, 115 died."

Until now the most complete concord of opinion existed among medical authorities in France and England; the greatest discord now exists. Many deny the efficacy of vaccination, and even the learned reporter has admitted (*Meeting of the Academy, June 29th*, 1852,) that "vaccination has not an inviolable virtue; that it has its weaknesses."

The virtue of vaccination must be often violated in England, and its weakness must be very great. Listen to the cry of pain uttered by the physician to the English hospital, who has witnessed its frequent violations and its great weakness. "In 1851, the proportion of persons admitted after vaccination amounted to 65 per cent.; it was only 44 per cent. in 1841. The increase is attributable to the more extensive diffusion of vaccination. A great number of persons who have

been vaccinated, live in continual fear of the small-pox. They flee at the first rumour of its appearance in their vicinity, and cannot be persuaded to visit the locality in which the small-pox hospital is situated."

This serious language is attended to, in a country where reason always prevails. It is only the echo of the general opinion in England in opposition to vaccination. In France, too, I see with pleasure, the commencement of a reaction. Professor Trousseau has said aloud, that "vaccination is an error which has had its day." Defections occur daily. I will cite a single one. The council of the Haute-Marne, until then very zealous, voting a large sum annually for the propagation of vaccination, on the 29th of August 1852, spoke as follows. "The council-general desires that new investigations should be undertaken to verify the influence of vaccination upon the progress of the population."

The French reporter, forgetting his publication of 1833, has twice repeated that variola is a disease common to every age. I have explained to him why this disease attacks our youth more frequently than formerly. By the effect of vaccination, I asserted, the unmodified variolous poison is usually displaced: this is why epidemics of small-pox, instead of being manifested in children under fifteen, as formerly, and as is still the case, among the Arabs, attack especially vaccinated youths of fifteen to thirty years of age. Let us return to 1800; let us suppress vaccination; and variola will resume its former habits, and will attack children chiefly, for it is essentially a disease of childhood, an eruptive fever.

I was told that I was an unknown doctor, and other arguments of like force. The language held in the Academy of Medicine is very different from what is heard in the English Medico-Chirurgical Society. In the assembly of the illustrious medical men of England, calmness prevails; they listen seriously to a serious observation; those voluble philippics which contain no argument displease them:

Sunt verba et voces, præterquæque nihil.

Here, on the contrary, whatever opposes experience and wholesome tradition, is frowned down. "Vaccination shall never perish," is displayed on the flag. This is possible, but it is much more certain that small-pox will never perish.

Two years ago, in full Academy, it was said that in inoculating the variolous virus and the vaccine virus the result was often identical;" that is, inoculate with vaccine you will obtain small-pox; inoculate with small-pox and you will obtain vaccinia.

Why should I reply to those who dare to compare vaccinia to variola, even to the benignest form of it, that is to say, to small-pox produced by inoculation? This would be to assimilate a miasm which I can neither measure, or compare, or see, or handle, with a fluid virus which I can touch, place on my instrument, and use at my pleasure. I find no analogy between the sting of a bee and the bite of a serpent.

Another cause of error is the following; it is a serious one, for it

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[illegible] of the effects of variolous contagion: "The first effect of the variolous [illegible] gastro-intestinal inflammation. This proposition is supported by Boerhaave. "The variolous gastro-enteritis is characterised, [illegible] after the absorption of the virus, by an acute fever [illegible] constitutes the variola." This [illegible] by Sydenham, Hoad, Boerhaave, Stoll, Valentin [illegible] following demonstration of it: [illegible] by absorption or contagion, fever without eruption, a disease familiar to [illegible] Boerhaave, *morbus variolosus sine* [illegible] Those [illegible] that many persons had small-[illegible] cases," says M. Bégin, "the in-[illegible] evident, that the eruption is [illegible] accessory; the fever then pre-[illegible] progress."

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[illegible] the proposition, that the characteristic [illegible] infection, consists in that fe-[illegible] eight days after infection; a fe-[illegible] of the breath, (*fetor oris*) [illegible] a gastro-enteritis *sine pu-*[illegible] there is no small-pox with-[illegible] fever still, to assert that the [illegible] eruption.

[illegible] in that grand academic style [illegible] the time of the great Albert, [illegible] analogies of variola and vaccinia [illegible] alternately, either that inoculation [illegible] general eruption, or that vaccinia [illegible] One is the equivalent of the [illegible] run together in relations of [illegible] Those may divine this enigma [illegible] allegory. "Vaccinia is a disease [illegible] specifically distinct from small-pox, [illegible] that those who have undergone [illegible] mild form of small-pox." (*The Lancet*, March 16.

[illegible] By Dr. Rubach.

[illegible] a hospital for rail[illegible]men. [illegible] Of those [illegible] from subsequ[illegible]

The pneumonia was on the left side in 20, on the right in 18. In 6 cases the pneumonia was pure; in 32 there was conjoint pleurisy, with pleural friction; in 7 cases bronchial catarrh had, for a long time, preceded the pneumonia; in 10 cases bronchial catarrh was left behind. In 12 cases, after the commencement of convalescence, there was œdema of the feet; in 3 cases œdema came on at the height of the disease. 16 patients were delirious; 4 were icteric, and in 3 of these cases the pneumonia was on the left side; in one case, Bright's disease came on suddenly, at the commencement of resolution.

The commencement of the disease was, in the majority of cases, by shivering, and the patients could name the exact hour. In 36 cases the expectoration was characteristic, and in 7 there were fibrinous coagula.

Percussion seemed to give better evidence than auscultation; dullness being perceptible when the auscultatory signs were very obscure.

The average duration in hospital was 16¾ days.

In the treatment, general bleeding was not used; cupping was employed when the pain in the side was very severe. Warm fomentations after the cupping, or without it, gave great relief; blisters were avoided, as they distressed the patient, and their good effects did not ensue until hours after their application. In 4 cases tartar emetic was used; in the other cases nitrate of soda was employed, and afterwards senega and muriate of ammonia.— *Würtzburg Verhandl—(Med. Chir. Review.)*

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4. *Asthma—A Clinical Lecture at Hotel Dieu.* By M. TROUSSEAU.

Asthma is a chronic nervous affection, attacking the pulmonary organs in a peculiar manner, essentially periodical and intermittent when the disease is fairly established; and, like diathesic diseases, gout, gravel, and rheumatism, it leaves the patient in repose for some months, and suddenly re-appears.

Before passing to the exceptional forms of the disease, and the lesions which are imputed to it, I wish to describe its principal features, its habitual form. You can then easily recognize it at the bed side.

To understand asthma, it should be studied, not in the aged, where it has long existed, but in the young, where we can watch its incipiency, where it presents itself with clear and striking characteristics, without the complications which it induces after a time, or which are accidentally added to it. If then we take as an example, a young man attacked by asthma while in good health, this is what may be observed :—

Ordinarily, in the first part of the night—from ten o'clock till midnight, sometimes in the second—from midnight to six in the morning, the attack commences by a sudden oppression; an enormous weight seems to press upon the chest of the patient, who breathes laboriously. The expiration [illegible] some circumstances, even more active than the [illegible] are accompanied by a characteristic wheezing.

implies in the author a forgetfulness of the effects of variolous contagion. I will recall these briefly: "The first effect of the variolous agent, is to produce, particularly in adults, a gastro-intestinal inflammation *sui generis.*" This proposition is supported by Boërhaave, Stoll, Broussais, etc. "This variolous gastro-enteritis is characterised, seven or eight days after the absorption of the virus, by an acute fever which, with or without an eruption, constitutes the variola." This proposition is affirmed by Sydenham, Mead, Boërhaave, Stoll, Valentin, Carnot, etc. They offer the following demonstration of it:

Variolous contagion, whether it acts by absorption or contagion, frequently produces only a fever without eruption, a disease familiar to the ancients, and called by the great Boërhaave, *morbus variolosus sine variolis;* this is why Thouret thought that many persons had small-pox without knowing it. "In certain cases," says M. Bégin, "the inflammation of the digestive organs is so violent, that the eruption is manifested with difficulty, or is entirely prevented; the fever then persists, and the gastro-enteritis continues its progress."

Inoculators have always held that, "when the fever of invasion exists, the entire absence of pustules is no reason to doubt the nature of the disease, which is a true small-pox. It is important to reassure the relatives of children who have been inoculated, for they are guaranteed against infection for the future."

Therefore it appears from these two propositions, that the characteristic, pathognomonic symptom of variolous infection, consists in that fever which ordinarily appears seven or eight days after infection; a fever easily recognized by the peculiar fœtor of the breath, (*fœtor oris specificus,*) a fever which is nothing else than a gastro-enteritis *sui generis;* that it is erroneous to conclude that there is no small-pox without an eruption, and that it is a greater error still, to assert that the danger of the disease consists in the eruption.

Here then is the error, expressed in that grand academic style, which recalls the arcana of the art, at the time of the great Albert, and the physicians of Molière. "The analogies of variola and vaccinia are such, that we can say almost indifferently, either that inoculated small-pox is only vaccinia with a general eruption, or that vaccinia is only small-pox without this eruption. One is the equivalent of the other. They are two rivals, which move on together in relations of the best fellowship." I am no Œdipus. Those may divine this enigma who can. I understand better Dr. Gregory. "Vaccinia is a disease *sui generis,* too essentially and specifically distinct from small-pox, to allow it to be said with the least truth, that those who have undergone vaccination have experienced a mild form of small-pox." (*The conclusion in a future number.*)—*Revue Médicale*, March 16.

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3. *Report on thirty-eight cases of Pneumonia.* By Dr. RUBACH.

Among 230 patients admitted into a hospital for railway workmen, there were thirty-eight cases of pneumonia. Of these, five died from pneumonia or 13·37 per cent.; and one from subsequent arachnitis.

The pneumonia was on the left side in 20, on the right in 18. In 6 cases the pneumonia was pure; in 32 there was conjoint pleurisy, with pleural friction; in 7 cases bronchial catarrh had, for a long time, preceded the pneumonia; in 10 cases bronchial catarrh was left behind. In 12 cases, after the commencement of convalescence, there was œdema of the feet; in 3 cases œdema came on at the height of the disease. 16 patients were delirious; 4 were icteric, and in 3 of these cases the pneumonia was on the left side; in one case, Bright's disease came on suddenly, at the commencement of resolution.

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4. *Asthma—A Clinical Lecture at Hotel Dieu.* By M. Trousseau.

Asthma is a chronic nervous affection, attacking the pulmonary organs in a peculiar manner, essentially periodical and intermittent when the disease is fairly established; and, like diathesic diseases, gout, gravel, and rheumatism, it leaves the patient in repose for some months, and suddenly re-appears.

Before passing to the exceptional forms of the disease, and the lesions which are imputed to it, I wish to describe its principal features, its habitual form. You can then easily recognize it at the bed side.

To understand asthma, it should be studied, not in the aged, where it has long existed, but in the young, where we can watch its incipiency, where it presents itself with clear and striking characteristics, without the complications which it induces after a time, or which are accidentally added to it. If then we take as an example, a young man attacked by asthma while in good health, this is what may be observed:—

Ordinarily, in the first part of the night —*from ten o'clock till mid* night, sometimes in the second—*from midnight to six in the morning*, the attack commences by a sudden oppression; an enormous weight seems to press upon the chest of the patient, who breathes laboriously. The expiration becomes active, in some circumstances more active than the inspiration, and both are accompanied with wheezing.

This wheezing, which is not accompanied by an alteration of the timbre of the voice, is not apparently produced in the larynx, but deep in the chest, behind the sternum. At the same time sibilant râles are heard, which the patient himself compares to the notes of a bird, and which are accompanied by sonorous ronchi.

The intensity of the attack rapidly augments, and soon the oppression is such that the patient is forced to sit up, and even to stand in his chamber leaning against some piece of furniture, as a support for his inspiratory muscles; finally, he is forced to throw open the window, whatever may be the severity of the weather; and, strange as it seems, the patient affected with a pulmonary disease, which the cold would naturally aggravate, experiences, on the contrary, a marked relief.

The majority throw off the clothes that compress the chest; the waistcoat, the cravat, cast aside, the body half-naked, they come panting for the open air.

At the same time the veins of the neck swell, the face becomes livid, and the pulse becomes frequent.

Sometimes the oppression is carried to such a degree that life seems menaced, and the physician requires all the power which the habit of seeing these sort of paroxysms gives, in order to maintain his tranquility, in the presence of such a frightful assemblage of morbid symptoms.

The cough assumes a peculiar character, which the experienced physician readily appreciates; it is accompanied by a prolonged expiration; as it is very fatiguing to the patient, he endeavours to resist his desire to cough, the glottis closes spasmodically, and the air, overcoming this resistance, causes in escaping a characteristic sound.

After one, two, or three hours duration, rarely less, sometimes more, the patient respires better; he expectorates four or five thick, grayish, muco-purulent sputa, afterwards he falls asleep. Upon awakening he feels the fatigue of the previous night, but his respiration is good, he hastens to his business, he runs up stairs as if he enjoyed the plenitude of health.

In some cases, rare it is true, the paroxysm occurs during the day, and I may cite the case of my mother, in whom the attack always commenced about nine o'clock, and lasted for two hours, while no nocturnal paroxysm ever occurred.

In some patients the attacks recur with such regularity that they are enabled to predict the exact hour at which it will return. Having been subject, when twenty years of age, during three months, to attacks of asthma, which returned regularly at three o'clock in the morning, I have been able to decide this point in my own case. Ten years ago the same attacks re-appeared, and with the same periodicity of invasion, which took place invariably at three in the morning. Some persons have similar paroxyms in the course of the evening, at eleven, or half-past eleven; amusements or pre-occupations appearing to exert no influence upon the arrival of attack. In some rare cases, patients are able to postpone, to a certain extent, the onset by hygienic measures, just as patients who suffer from osteoscopic pains, postpone their inva-

sion, by retiring to bed later than usual. Those who suffer from a paroxysm upon going to bed, evade it for an hour or two by sleeping in a chair, it is true, but it is then as distressing as if they had lain down.

Asthma attacks persons in the prime of life violently, and the paroxysms diminish in proportion as life advances; at sixty and seventy years of age, the oppression is distinct and independent of the asthma.

Asthma is a disease of adults; it is at its greatest intensity at forty years.

Causes of asthma. Let us commence with the hygienic causes. Suppose an asthmatic, whose life appears menaced by the severity of his symptoms; change his place of residence, and you will believe that it is impossible that you see the same individual whom you had seen moribund so short a time before; and yet you are unable to explain theoretically the hygienic influence; you cannot attribute the cure to a milder climate or a purer air.

Example.—A young man of twenty-eight, residing at St. Omer, is taken with intense attacks of asthma. He is sent to London on business. He disembarks, and locates himself in the City, the most foggy and crowded portion of London. Certainly no one would direct an asthmatic to such a locality. He remains two years, employed in laborious occupations, without experiencing the slightest return of his disease. He returns to St. Omer, and in four days his attacks recur as in former times.

At the end of three months he was sent to Paris to me. After a short stay, the asthma disappeared and his health became robust. He went to visit his aunt at Versailles, and passed three days there during the fine season; his paroxysms returned. Again he returns to Paris, and during his sojourn of six months there was an entire cessation of his attacks. He was compelled to return to St. Omer; scarcely had he reached that city, when they wrote me that his disease had re-appeared with renewed intensity. I wrote that he should be immediately brought to Paris by the rail-road, upon a litter, if no other means were possible; this was done. In ten days my patient was perfectly well.

Second example.—Two twins born in the department of Bouches-du-Rhone had resided at Marseilles without suffering at all from asthma, yet whenever their business called them to Toulon they were sure to be attacked by it. They could live at Bordeaux with impunity. In Germany, the disease disappeared and recurred, in different cities in which they sojourned, although it was impossible to explain these alternations by the climate, change of season, or hygienic conditions.

Third example.—An ordonnance officer, a relative of the Emperor, born in Corsica, does not pass ten nights in his bed, when he is in Paris. Sent upon a mission to Clermont-Ferrand, an elevated country in the midst of mountains, and compelled to take long rides in the cold and snow, he never experienced the influence of his disease. Since his return to Paris, his attacks recur as formerly.

The influence of temperature is just as inexplicable. Thus, when we study this disease in a great number of patients, we are struck with

the fact that it is more frequent in summer than in winter, and the commencement of the attack is often announced by a peculiar coryza. When the patients sneeze violently and repeatedly, they know that the paroxysm is at hand. Why are the attacks more frequent in summer? I do not know; but the fact is worth knowing, and it should teach us, in certain circumstances to distrust hygienic data. Each asthmatic is variously affected by hygienic influences, and by experience knows better than any one else, what it is best for him to do; therefore it is not until after studying for some time the individuality of his patient that the prudent physician can give useful counsel.

Pathological causes.—The majority of asthmatics are greatly disposed to contract chronic diatheses, and we frequently observe asthma alternating with attacks of gout; dartrous eruptions are in the same category; thus a lichen impetiginoides will make way for well-marked attacks of asthma, and these in their turn will disappear and the herpetic affection will return.

Asthma, it has been said, is only a symptomatic expression of an affection of the heart or lungs, and an illustrious man, M. Louis, has confounded emphysema of the lung with asthma, attributing the latter to the organic pulmonary lesion. This opinion will not bear a minute examination, and the cause of its error is easily found.

When M. Louis has examined old asthmatics in hospitals, he has found pulmonary emphysema, but in his private researches, in young men, suffering from asthma, whom I have sent him, who have been examined by eminent men of art, he has not been able to find a trace of emphysema. M. Louis is right when he affirms that emphysema exists after asthma; but he is wrong when he makes it precede that disease.

When the attacks are frequently repeated, and last for a long time, asthma is complicated with catarrh, and consequently with emphysema of the lung, and it is in this sense only, that the relation of cause and effect can be established between asthma and pulmonary emphysema.

Treatment.—The treatment of asthma is divided into the treatment of the paroxysm of the diathesis, and, lastly, of the complications which may supervene.

When an individual is affected with attacks of asthma, recurring every three or four years, and each paroxysm lasting only a few minutes, the indications are simply to diminish, as much as possible, the violence of the attack, and among the substances, by the aid of which this end is obtained most surely, the poisonous solanaceæ are to be placed in the first rank. Hyoscyamus, mandragora, belladonna, tobacco, datura stramonium, etc., can be employed with equal success. There are conditions, however, in which these remedies lose their efficacy; such, for example, is the habit of being subjected to the toxicological influence of the solanaceæ. Smokers experience their benefits less than others, for it is not demonstrated that solanine and nicotine are not identical principles. Nevertheless, even in these cases, good effects are obtained from the inhalation of the smoke of leaves of belladonna, and the leaves and roots of henbane. When patients do not smoke habitually, cigars or a pipe of tobacco may be advantageously prescribed.

For women who do not know how to smoke, or who have a repugnance to it, leaves of stramonium or belladonna may be placed on hot metal, and the vapour allowed to fill the apartment.

With some asthmatics, the solanaceæ are useless. In these cases the following treatment is frequently of service: Papers are moistened with a strong solution of nitrate of potash, and afterwards dried and rolled into the form of a cigarette, of which the smoke is inhaled. Relief is sometimes obtained in two or three minutes.

The brother of M. Pasquier, ex-chancellor of France, was director of the administration of tobacco. He was seized with frightful attacks of asthma, over which the odours which he habitually inhaled in his manufactory, as well as the most energetic remedies, exerted no effect. He had but one mode of relief, which consisted in lighting five or six Carcel lamps; as soon as the strong artificial light was created, the attack ceased, but returned with the darkness. For thirty years, the persons around him had recourse to this singular mode of treatment, and always with the same efficacy.

Sometimes the attack may be moderated, or even cut short, by means of discs charged with opposite electricities, applied, one to the pit of the stomach, and the other to the back. This method, strange as it is, should not be neglected, as it is often effectual.

It frequently happens that attacks of gout or gravel alternate with asthma. One of my patients, residing at Montreuil, gouty, and affected with gravel, experiences neither of these infirmities during his attacks of asthma, which are of terrible severity; subsequently an attack of gout will come on, the asthma will disappear, and reciprocally. With these patients the alkaline regimen should always be combined with the employment of narcotics, and this is the method which I pursue in these circumstances, a method devised by M. Brettoneau, and which has the support of his experience.

Extract of belladonna is employed in pills of 1-5 of a grain. The patient takes a pill daily for a fortnight. During the second fortnight he takes two pills daily, afterwards three pills during the third fortnight, and so on until the dose has reached a grain and a half daily, as in the treatment of epilepsy; the treatment is then suspended for some weeks, and resumed and pursued in this manner for several years. At the same time the bi-carbonate of soda is administered to overcome the gouty diathesis. A vegetable diet should be observed throughout the treatment.

The other complications which may supervene, such as catarrh, diseases of the heart, etc., require the combination of the balsams, digitalis, etc.*—*Gazette des Hôpitaux*, No. 36, 1853.

* M. Trousseau does not allude to the inhalation of anæsthetics during the paroxysms of asthma. In one case which we recently treated, the patient derived great relief from inhalations of sulphuric ether, persevered in for several hours, complete insensibility being avoided.—[O.

5. *Therapeutic Uses of the Bark, Leaves, Seeds, and Root of the common Ash, (Fraxinus Excelsior.)*

In a work recently published by Dr. OTTERBOURG,* some interesting remarks are made upon the use of the *leaves* of the ash in gout and rheumatism. It appears, that since these leaves were introduced into the *materia medica* of Germany, in 1841, by Rademacher, they have enjoyed a very considerable reputation for remedial powers in the diseases just named. Apparently in ignorance of the therapeutic reputation which ash leaves had obtained in Germany, two French physicians, Drs. Pouget and Peyraud, published a paper in the *Union Médicale*, for November 27, 1852, in which they detail various cases of gout and rheumatism cured by the ash-leaves; and among the cases of gout described, is that of one of the authors, Dr. Peyraud. The value of the *bark* of the ash is of older date, and is better known. A few remarks, founded upon the works referred to, and upon information gleaned from other sources, may be useful to many of our readers, who, in hospitals, dispensary, or union practice, may be often glad to be able to substitute cheap and indigenous remedies for costly drugs, whenever equal advantages can be obtained from the former.

The bark of the *fraxinus excelsior* is bitter and astringent. Its febrifuge action is undoubted; and, so long ago as 1712, it received the name of European cinchona. It has been employed in the form of tincture, decoction, infusion, and powder. The dose is rather larger than of the corresponding preparations of cinchona. The infusion is as good a form as can be adopted. We may remark that the retail price of the bark, in Covent Garden Market, is two-pence per ounce.

The leaves are said by some to be purgative; by others, they are declared to have no such effect. From their general similarity of appearance, they are sometimes substituted by the druggist for senna leaves. The London seed vendors generally have a supply of ash-leaves, but they inform us that they are seldom asked for, and that they do not know the therapeutic virtues on account of which their customers purchase them. We believe that an investigation of the medicinal properties of ash-leaves would, if properly conducted, yield some useful results; for, in various parts of this and other countries, they now are and long have been used successfully in various traditional nostrums.

In 1842, Dr. Peyraud had his first attack of gout, which was severe, and lasted for twenty-five days. During the three following years, the attacks increased in frequency and severity. Having derived little benefit from the remedial means which he had resorted to, he listened to the suggestion of one of his patients, an inhabitant of the department of Dordogne in France, who advised him to try an infusion of ash-leaves, informing him, at the same time, that his forefathers had been cured by this prescription, and that many of the country people got rid of "their pains" by employing it. Dr. Peyraud took the in-

* Aperçu Historique sur la Médecine Contemporaine de l'Allemagne. Paris, 1852.

fusion of ash-leaves, and from 1845 to 1849 had no fit of gout. He then had an attack which yielded in five days to the infusion of ash-leaves, used under the observation of Dr. Pouget. These circumstances recalled to the recollection of Dr. Pouget a fact which he might otherwise never again have considered. It was this: that when he was a physician at Soréze, in 1824, the peasants of that place had spoken to him of the great power which an infusion of ash-leaves had in driving away pains. He afterwards discovered that it had been used forty years ago as a gout specific by the peasants of Auvergne.

A commercial traveller, who had been gouty for twenty years, and had saturated himself with the syrup of Boubée and other vaunted specifics, consulted Dr. Pouget. At this time he was an almost constant prisoner in his room with successive attacks. After eleven days' use of the infusion, he was able to walk two kilomètres (one and a quarter English mile); in fifteen days he resumed his journeys, and was able to travel without suffering, by diligence, from Bordeaux to Quimper.

Several other cases are detailed, some of them acute, and others chronic. Articular rheumatism, in numerous instances, was also benefited by the infusion of ash-leaves.

Drs. Pouget and Peyraud thus sum up their opinions as to its efficacy and mode of administration:—

"The powder (infused) of ash-leaves is perhaps a true specific for gout and rheumatism; combining with the most curative action, the immense advantage of giving rise to no dangers nor inconveniences, such as result from the use of colchicum. Having no purgative properties, it may be taken in any condition of the digestive canal. It causes neither nausea, sickness, general discomfort, nor depression. Experience enables us to state, that generally, under its use, at the end of four or five days, and sometimes sooner, the pain, redness, and swelling have sensibly diminished in intensity, or have even disappeared."

The method of administration is thus minutely described:

1. Each dose of the powdered leaves ought to be infused for three hours in boiling water.

2. Before this infusion is taken, it requires to be sweetened to taste, and strained through a linen cloth.

3. In acute gout, and especially at the commencement of the attack, (whether with or without fever,) two doses of the powder ought to be infused in three cups of water; one to be taken at bedtime; the second, early in the morning; and the third between breakfast and dinner. The medicine, in diminished doses, requires to be continued for eight days after the symptoms have disappeared.

4. In chronic gout, a cup of infusion ought to be taken night and morning, for a long period. Fits of gout may be more or less indefinitely postponed by having recourse to this treatment, say for eight or ten days in every month.

5. In acute rheumatism, the infusion greatly assists the action of other medicines which are commonly used; and it is particularly beneficial in removing articular swellings. It produces equally good results in chronic rheumatism, whether articular, muscular, or nervous.

6. During the use of the remedy, it is not necessary in any way to change the mode of living, nor to adopt any special regimen, so long as the laws of sound hygienics are observed.

Speaking of the dose and method of administration, Dr. Otterbourg says: "Several times during the day, thirty-two grammes of ash-leaves may be taken, infused in a sufficient quantity of hot water. In muscular pains, and in rheumatism of the scalp, this is an excellent means of cure."

From various works, we have gleaned the following notes regarding the bark, leaves, seeds, and root.

Pliny ascribes numerous medicinal virtues to ash-leaves, and speaks of them as a specific for the bites of serpents, (lib. vii. c. 13.) Bouregard, a surgeon of Rochelle (*Anc. Journ. de Méd.* vi. 233,) and others, have cited cases from their own practice in corroboration of this statement. Willich and others speak of the tonic properties of ash-leaves. Pélétin and Gilibert recommend them in scrofula. Tablet, in 1711, declared them to be equally purgative as senna leaves, but less liable to cause griping. Coste and Willemot found them less aperient than senna leaves, one-third more being required as a dose. They state, that the evacuations were sooner completed, and that, along with their purgative properties, they have a diuretic action. Hooper, in his *Medical Dictionary*, has the following notice: "The bark, when fresh, has a moderately strong bitterish taste. It possesses resolvent and diuretic qualities, and has been successfully administered in the cure of intermittents. The seeds are occasionally exhibited as diuretics, in the dose of a drachm." The vermifuge action of the bark is mentioned by several authors, and Bergius says, "Sunt qui multum sperant de cortice fraxini, in lacte vel aqua cocto, adversus vermes, atque etiam contendunt, hunc corticem sæpe vermes pepulisse, ubi alia fefellerunt." (*Tomus* ii. p. 832. *Stockholmiæ*, 1778.) According to Martin-Solon, the decoction of the root is purgative and emetic. (*Bul. Gén. de Thérap.* i. 163.) Mérat and De Lens, in the *Dict. de Matière Médicale*, give the fullest notice which we have seen of the medicinal properties of the different parts of the ash. At the end of their article, the following authorities are cited: Schroer (J. C.) Description du Frêne avec l'Enumération de ses Propriétés Médicales (en Allemand,) etc. Francfortsur-l'Oder: 1700, in 8. Helvig (G.) Diss. de Quinnquinâ Europæorum, sive Cortice Fraxini. Grypswaldiæ: 1712, in 4. Schreger (B. N. G.) Diss. de Corticis Fraxini Excelsioris Naturâ et Viribus Medicis. Lipsiæ: 1794, in 4. There is no reference to fraxinus excelsior in Woodville's *Medical Botany;* and Decandolle, Richard, Stephenson, Churchill, Duncan, and Pereira, make no mention of its medicinal properties.

Additional information is obviously required regarding the medicinal properties of the bark and leaves of the common ash. Can any of our readers contribute towards supplying this deficiency? Under certain circumstances, the leaves, it appears, are purgative, and in others astringent; this, and various points connected with the physiological effects produced on different organs, evidently demand experimental

elucidation. The discrepancy of opinion among observers may be explained by the experiments having been made with leaves gathered at different seasons. Mérat (*Dict. de Mat. Méd.*) advises that the leaves be gathered when in full vigour, and carefully dried for winter use; but in summer they may be used green.—*Assoc. Med. Journ.* Jan. 7, 1853.—(*Am. Journal of Med. Sciences,* April.)

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6. *Ergotine in Intestinal Hæmorrhage.* By M. BONJEAN, of Chambéry.

[We take the following extract from a letter addressed to the president of the Academy of Medicine of Paris.]

"Several distinguished physicians of Geneva have obtained the happiest results in cases of intestinal hæmorrhage, supervening during the course of typhoid fever, from the use of ergotine, a remedy whose hæmostatic properties are now well established. MM. Rilliet and Lombard have cured cases apparently hopeless, in which this complication occurred, by the aid of this drug, and numerous facts, attesting its favourable effects, have been communicated to the Medical Society of Geneva.

"The following method of administration may be adopted in cases of intestinal hæmorrhage. ℞. Of ergotine, ℈ij; of warm water, ℥iij; of syrup of orange flowers, ℥j; prepare a potion, of which a spoonful may be given every hour—the dose being diminished in proportion as the hæmorrhage abates. Or, ℞. Of ergotine, ʒij; of warm water, ℥viij; and prepare an enema. It is true that this formula contains more ergotine than is usually directed in the formularies, but in such a serious complication, it is necessary to act decisively, and, as ergotine is free from the toxicological principle contained in the ergot, its dose may be increased without danger, when the physician requires a prompt result.

"I am far from asserting that ergotine is an infallible remedy in hæmorrhage, but I believe that I only echo the sentiment of the best French and foreign physicians, by affirming that it is a most valuable hæmostatic, having a peculiar control over internal hæmorrhages, hæmoptysis, hæmatemesis, epistaxis, uncomplicated uterine hæmorrhage, etc."—*Bulletin de l'Académie de Médicine,* March 15th, p. 505.

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7. *On some of the Principal Effects resulting from the Detachment of Fibrinous Deposits from the Heart, and their Mixture with the Circulating Blood.* By WILLIAM SENHOUSE KIRKES, M. D.

[A most interesting paper on this subject appears in the last volume of the transactions of the Medico-Chirurgical Society. We are unable to extract it in full on account of its length, but will present our readers with the following abstract, taken from the London Lancet.]

Dr. Kirkes began by saying, that it was a clearly-established fact, that the fibrinous principles of the blood might, under certain circum-

stances, separate from the circulating fluid, and be deposited within the vascular system, especially on the valves of the heart. The forms of fibrinous concretions, to which the following observations especially applied, were, first, the masses usually described as Laennec's globular excrescences; and, secondly, the granular or warty growths adhering to the valves, and presenting innumerable varieties, from mere granules to large irregular fungous or cauliflower excrescences, projecting into the cavities of the heart. These growths, when once formed, whatever might be their origin, were full of peril, and would often remain so, long after the circumstances which gave rise to them had passed away. When of large size, or loosely adherent, they might at any time be detached from the valves, and conveyed with the circulating blood, until arrested within some arterial canal, which might thus become completely plugged up, and the supply of blood to an important part be suddenly cut off, from which serious if not fatal results would ensue; or, smaller masses might be detached, and pass on into arteries of much less size, or even into the capillaries, whence congestion, followed by stagnation and coagulation of the blood, and all the consequent changes such coagulated blood is liable to undergo in the living body, would necessarily follow. Many singular morbid appearances observed in internal organs, and not well accounted for, were probably brought about in this manner. Again, the masses of fibrine might soften, break up, and discharge the finely granular material resulting from their disintegration into the circulating blood, and, contaminating this fluid, might excite symptoms very similar to those observed in phlebitis, typhus, and other analogous blood diseases. Thus the fibrinous material detached from the valves, or any other part of the interior of the heart, might be the cause of serious secondary mischief. The parts of the vascular system in which these transmitted masses of fibrine might be found, would in great measure depend upon whether they were detached from the right or left cavities of the heart. Thus, if from the left, they would pass into the aorta and its subdivisions, and would be arrested in any of the systemic arteries or their ramifications, and especially into those organs which receive large quantities of blood direct from the left side of the heart, as the brain, spleen, and kidneys: on the contrary, if escaping from the right cavities, the lungs would necessarily become the primary, if not the exclusive, seat of their ultimate deposition. A division of the subject being thus naturally formed, the author proposed to consider the subject, first, as to the remote effects resulting from the separation of fibrinous deposits from the valves or cavities of the left side; and, secondly, as to the corresponding effects produced by the detachment of like deposites from the valves or cavities of the right side of the heart. The author then proceeded to elucidate the first branch of the subject, in which masses of some magnitude were detached from the left side, and arrested in an arterial channel of notable size. This pathological fact was illustrated by three cases, in many respects identical; for, in each death appeared to ensue from softening of the brain, consequent on obstruction in one of the principal cerebral arteries by a mass of fibrinous material, appa-

rently detached from growths on the left valves. The first case was that of a female, aged 34, of pale and delicate aspect. She had suffered from rheumatic pains, and there was a loud systolic murmur heard over the entire cardiac region. While under treatment for these symptoms she suddenly fell back as if fainting. She was found speechless, with partial hemiplegia on the left side, but there was no loss of consciousness; the hemiplegia increased, involved the face and limbs, and gradually became complete in regard to motion; but sensation remained unimpaired. These symptoms lasted five days, when she quietly died. The post-mortem examination developed much congestion of the pia mater, amounting, in some places, to ecchymosis. The right corpus striatum was softened to an extreme degree—being reduced to a dirty, grayish-white pulp. In the posterior lobe of the right cerebral hemisphere was a similar spot of pale softening. The right middle cerebral artery, just at its commencement, was plugged up by a small nodule of firm, whitish, fibrinous-looking substance, not adherent to the wall, but rendering the canal almost impervious. The vessels of the brain were generally healthy, except a yellow spot or two in the coats of those at the base of the brain. The heart was enlarged; several broad white patches externally. The right valves were healthy, so also were the aorta; but the mitral valve was much diseased, the auricular surface being beset with large warty excrescences of adherent blood-stained fibrine. The right common iliac artery, about an inch above the origin of its internal branch, was blocked up by a firm, pale, laminated coagulum, which extended into the internal iliac. The pleuræ were adherent in places; liver and intestinal canal healthy; spleen large, pale, and soft, and contained a yellowish-white, cheesy substance. The kidneys were pale, rough, and granular; within the cortex of the right were several large masses of yellow deposit, surrounded by patches of redness. Death had resulted in this case from the softening of a large portion of the right side of the brain, which the author considered to have arisen from an imperfect supply of blood, consequent on the middle cerebral artery of the same side being obstructed by a plug of fibrine. The author then discussed the sufficiency of such an obstruction to produce the effects ascribed to it, and he brought forward many examples, showing that atrophy and disorganization usually resulted from any circumstance which materially impeded, or entirely cut off, the supply of blood to a part. The author then directed attention to the probable source of the fibrinous plug found in the middle cerebral artery. The suddenness of the cerebral symptoms rendered it probable that the blocking up of the artery was equally sudden, and not the result of gradual coagulation of the blood within the vessel. The absence of all local mischief in the coats of the artery at the point of obstruction, as well as elsewhere, pointed to some other than local origin for the clot; and the author, at the time of examination, formed the opinion, that a part of the fibrinous deposit on the mitral valve had become detached, and carried by the stream of blood, until arrested at the angle whence the middle cerebral proceeded. This explanation suited equally for the plug found in the common iliac; for it was quite

conceivable that portions of the loosely adherent fibrine might be easily detached by the stream of blood washing over the mitral valve, and when once admitted into the circulating current, they would only be arrested by arriving at a vessel too small to allow their transit along its canal. Two other cases were described by the author, possessing many interesting points of resemblance: one, a female, aged 24; the other, a male of the same age. Both were admitted into the hospital with hemiplegia of the left side; each had heart disease, indicated by a loud systolic murmur. The post-mortem examinations revealed the following morbid appearances common to both:—Softening of a limited portion of the brain, producing death by hemiplegia; obliteration of the cerebral artery supplying the softened part; coagula in one of the iliac arteries; fibrinous deposits in the kidneys and spleen; and the presence of fibrinous warty excrescences on the valves of the left side of the heart. So many and such rare features of resemblance could not fail to demonstrate a very close connexion between the several morbid appearances so exactly reproduced in each case. The author believed that these three cases satisfactorily established the two following conclusions—1st, that softening of a portion of the brain, with attendant loss of function, might result from obstruction of a main cerebral artery by the lodgment of a plug of fibrine within its canal; 2ndly, that the foreign substance thus obstructing the vessel was probably not formed there, but was derived directly from warty growths situated on the left valves of the heart. The author thought it not improbable, although in the absence of direct proof it was but supposition, till further investigation confirmed these facts, that many cases of partial and temporary paralysis suddenly ensuing in one or more limbs of young persons, especially if accompanied with signs of cardiac disease, might be due to interruption of a proper supply of nutriment to the brain by the temporary plugging up of a principal cerebral artery by fibrine, detached from a diseased valve on the left side of the heart. Other arterial branches, besides those of the base of the brain, might arrest these fibrinous deposits derived from the valves of the heart. In two cases coagula were found in the iliac and femoral arteries; and in a third, in the renal. The author thought that many specimens found in museums, and supposed to illustrate the spontaneous coagulation of the blood, or the deposition of fibrine within a limited portion of an arterial trunk, were probably to be referred to the same cardiac origin, and he illustrated the point by reference to a preparation in the museum of St. Bartholomew's Hospital. The second subject of inquiry consisted of an examination into the effects produced by smaller portions of fibrine detached in a similar manner, but arrested in the minute arterial branches, or even in the capillaries. The author thought that the singular masses of yellow fibrinous substance found in the spleen and kidneys, and other organs, and hitherto described as "capillary phlebitis," "metastasis," or "fibrinous deposits," were derived from this cause. Out of twenty-one cases in which the author had observed these deposits in the spleen and kidneys, or other parts deriving blood directly from the left side of the heart, in nineteen there was disease

of the valves, or of the interior of the left side of the heart. In fourteen of these there were fibrinous growths on the surface of the left valves; in the remaining five there was simple mention of valvular disease. The author thought that the mere fact of so large a number of cases of so-called "capillary phlebitis" being associated with the presence of fibrinous deposit on the valves of the heart, suggested a very close relation between the two morbid states. The author then entered upon the third branch of this part of the subject, concerning the series of effects which might result from the introduction of fibrinous particles into the circulating blood, manifesting phenomena indicative of the existence of a morbid poison in that fluid. A case was related of a youth, aged 14, admitted into the hospital with obscure typhoid symptoms, the surface of the body being covered with petechiæ. Delirium, with much febrile prostration, followed; he became subsequently comatose, and died. Upon examination of the body, the surface was found covered with petechiæ. The pia mater was infiltrated with what seemed recently effused blood. The surface of the brain thus presented a blotchy appearance, and amid these spots were yellow coloured patches of various sizes; some were of a greenish-yellow hue, and had the appearance of being smeared over with pus. The brain was unduly congested, and some ecchymosis near the surface; the cerebral arteries and sinuses healthy; several petechial spots on the surface of the heart, as well as in the cavities; and on the auricular surface of the mitral valve some white fibrinous vegetations, very soft and friable; a like deposit on the aortic valves, with evidence of ulceration; several yellow masses of fibrinous deposit on surface of spleen; cortical part of the kidney covered with minute petechial spots, in the centre of which was a buff-coloured dot; several large yellowish blotches extended deep into the substance of the cortex. The intestinal mucous surface was covered with petechial spots, which were apparent also on the mucous membrane of the bladder, pharynx, œsophagus, stomach, larynx, and trachea. The author considered the mystery of this case cleared up by the post-mortem examination. The attack had been ushered in by a severe pain in the right groin, which was rheumatic; then ensued rheumatic inflammation of the mitral and aortic valves, with ulceration of the latter, and deposition of fibrine. From these deposits portions had probably separated during life, and were transmitted with the blood to all parts of the body, and being arrested in the capillary networks and smaller arteries, produced the various petechial and buff-coloured spots above described.

The second part of the paper related to the effects which might result from the detachment of fibrinous deposits from the right valves of the heart. Reference was made by the author to a paper on the "Formation of Coagula in the Pulmonary Artery," by Mr. Paget, published in the Transactions of the Society, as well as to a specimen in the museum of St. Bartholomew's Hospital, in which there was deposition of fibrine on each of the pulmonary valves, with old coagula filling many of the branches of the pulmonary artery. In this case several large, solid, fibrinous masses were found in the substance of the lungs, pre-

senting appearances not unlike portions of old pulmonary apoplexy. Lastly, the author recapitulated the principal points which he was desirous of establishing—viz., 1st. That fibrinous concretions in the valves of the heart admit of being readily detached during life. 2ndly. That if detached and transmitted in large masses, they may suddenly block up a large artery, and thus cut off the supply of blood to an important part; if in smaller masses, they might be arrested by vessels of a smaller size, and give rise to various morbid appearances in internal organs; or the particles mingled with the blood might be but the *débris* of softening fibrine, yet with power to produce a poisoned state of the blood, and bring on typhoid or phlebitic symptoms. 3rdly. That the effects produced and the organs affected would be in great measure determined by the side of the heart from which the fibrinous material had been detached; if from the right side, the lungs would bear the brunt of the secondary mischief; but if, as was most commonly the case, the left valves were the source, the mischief would be more widely spread, and might fall on any part, but especially on those organs which were largely and directly supplied with blood from the left side of the heart, as the brain, spleen or kidneys.

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8. *Three cases of Hemiplegia, produced by the obstruction of the Cerebral Arteries.* By. Dr. RUHLE, of Breslau.

The sudden occurrence of hemiplegia, with or without loss of consciousness, is an accident by no means uncommon in diseases of the heart. Examinations show as the cause of these phenomena, either apoplexy or softening of the cerebral substance. The frequent combination of the latter with stopping of a neighbouring cerebral artery establishes a connexion between the two. Virchow has demonstrated, in his work upon "Acute Inflammation of Arteries," that some of the coagula in arteries are dependent upon foreign bodies, which are conveyed thither by the stream of blood from distant parts. He has called these "partially obliterating coagula," and has communicated some cases where such masses have been found in the cerebral arteries, and where there has been softening in the corresponding segment of the brain.

The cases related by Dr. Rühle are interesting, because there was no disease of the arterial coats at the affected part. As the subject is one of special interest, we will relate the cases at some length.

Insufficiency of the aortic valves.—Narrowing of the aortic aperture.—Large movable concretion on one of the valves.—Sudden paralysis of the right half of the body.—Stopping of the left arteria fossæ sylvii by a piece of carbonate of lime without any disease of the arterial coats.—Softening of the middle part of the left cerebral hemisphere.

Emil Scholz, aged 19, was attacked (August 11, 1851) by acute articular rheumatism, during the course of which he experienced pain in

the præcordial region, accompanied with shortness of breath. Under the nipple and in the fifth intercostal space there was heard loud systolic and a faint diastolic murmur; towards the right, the systolic murmur decreased in degree. There was a systolic murmur in both carotids. The radial pulse was small.

The diagnosis proclaimed—"Stenosis ostii aortæ; insufficient valv. semilun. aortæ; insufficient valvula bicuspidalis; hypertrophy and dilatation of both ventricles."

On the 6th of September, there suddenly came on loss of consciousness and paralysis of the right side, the latter affecting the muscles of the tongue, the face, and of the upper and lower extremities. The symptoms remained unchanged till death, which ensued September 27.

Examination of the Body.—Infiltration into the pia mater. The left arteria fossæ sylvii is plugged in the first part of its course. The plug consists of a firm, calcareous deposit, surrounded by soft, yellowish fibrin; from here to the next collateral branch, a clot filling the vessel; from there, the vessel empty. The walls of the vessel at the plugged point, and of the vessels generally at the base of the brain, smooth, transparent, and healthy. The whole left corpus striatum and neighbouring cerebral substance, to the depth of half an inch to an inch, of light yellow colour, and semifluid; it contained numberless fat granule cells; the rest of the brain normal. Fluid in the pericardium; fibrinous shreds attached to the surface of the heart. Left ventricle greatly dilated and hypertrophied; nothing abnormal at the ostium venosum or valvula bicuspidalis. The semilunar valves of the aorta shrunken, thickened, and stiff. On the posterior valve a long, movable, mulberry-like body, the size of a hazel-nut, consisting of lime, covered with fibrine. The inner surface of the aorta, close above the valve, torn transversely to about half an inch. The circumference and base of this slit, and the neighbouring parts, covered with a transparent, yellow, firm substance. The aorta and its branches normal. Other structures healthy.

That the concretion in the left arteria fossæ sylvii came from some distant part is proved by the perfect integrity of the coat of the cerebral artery. In no other situation than that of the aortic valves was found this formation of calcareous matter. The mobility of the deposit, and the increased force of the current of blood consequent upon the hypertrophied condition of the muscular walls, and the narrowing of the aortic outlet, favoured the detachment of the deposits. Near the plugged vessel was found softening of the brain. Was this a consequence of the state of the artery? Before replying in the affirmative, the numerous anastomoses in the cerebral circulation must be considered. However, softening of the brain is known to ensue after ligature of one common carotid. Dr. Rühle thinks that the one must be the consequence of the other, when, as in the preceding case, the walls of the vessel are free from morbid change.

He then considers the connexion between the hemiplegic symptoms and the ramollissement. Did the former, which came on suddenly some weeks before death, depend on the latter? Ramollissement may

go on without producing symptoms during life; and in all cases it must be more or less progressive. Did the hemiplegia ensue upon its attaining a certain degree? The following case is one of special interest, as showing that the stopping of the circulation in the vessel can of itself call forth the symptoms of hemiplegia without there being any change in the cerebral substance.

Deficiency in the valvula bicuspidalis.—Old fibrinous deposit upon its surface.—Sudden paralysis of the right side with sopor.—Death in seven hours.—Stopping of the left internal carotid artery, without any obvious change of structure, in the left cerebral hemisphere.

Auguste Tietze, aged 34, suffered from acute articular rheumatism Jan. 9, 1851. Upon her dismissal, May 2, there was a systolic murmur, strongest at the apex of the heart; increase of the second sound in the second intercostal space on the left side; diminution in the third and fourth intercostal spaces. On July 22 the patient again experienced pain in the left knee joint, attended with effusion. On September 12 she ate her breakfast as usual; an hour afterwards she was found speechless. There was paralysis of the right side of the face, difficulty in moving the tongue, inability to sustain the right arm when raised, or to bend the right leg. Death ensued at two p. m.

Examination of the Body.—The left internal carotid artery is plugged by firm, dry, brownish coagulum, from which softer and newer coagula extend into the arter. ophthalmica and arter. fossæ sylvii; the common carotid is free; the cerebral substance unaltered; the left auricle of the heart enlarged and hypertrophied; the ostium venosum sinist. narrowed to a fissure, which only admits the little finger. At the left extremity of this fissure lies a dry, brown coagulum, imbedded in a calcareous fissure; it is about the size of a cherry, and projects by its free extremity into the left ventricle, which, however, was quite healthy.

The formation of warty growths on valves, which offer no impediment to the circulation, and produce no morbid sound, may lead to the same phenomena in cases beyond the reach of diagnosis.

Stopping of the left internal carotid by a firm elastic white plug.—Softening of the lower and middle part of the left hemisphere.—Paralysis of the whole right side of the body.—Old fibrous deposits on the auricular surface of the otherwise normal bicuspid valve.—Tuberculous disease of the lungs.

Frau Schwenk, aged 26, admitted into the hospital Dec. 18, 1851, with paralysis of the right side of the body, and symptoms of extensive tuberculous disease in the chest. Died Jan. 1, 1852.

Examination of the Body.—Upon the convex surface of the upper surface of the left cerebral hemisphere is a diffused extravasation of blood. The vessels at the base of the brain are quite normal. The left internal carotid contains, with a perfectly healthy condition of its walls, a white and elastic plug, completely filling the vessel, and extending to the arter. ophthalmica. Some of the convolutions are soft-

ened in the middle lobe as deep as the wall of the lateral ventricle. In the heart, there was seen, from the left auricle, upon the long process of the bicuspid valve, in the middle between its free end and point of insertion, two irregular fibrous coagula about the size of cherry stones. The valve in other respects normal. No other coagula in any other part. In the lungs were found extensive vomicæ.

In the three cases here related there was plugging of the cerebral arteries of the left side, with paralysis of the right half of the body. If in the left side of the heart fibrinous or calcareous deposits become separated and are driven forwards by the stream of arterial blood, they reach the left carotid much easier than the arteria innominata, as the former is much more the continuation of the first part of the aortic arch than the latter, which is given off at an angle.

A similar explanation, viz., the angle by which the vessel leaves the trunk, is offered by Virchow to account for the more frequent occurrence of mortification in the left lower extremity from the plugging of the left iliac artery.—*Virchow's Archiv.* 1853. (*Medical Times & Gazette*, March 19th, 1853.

MATERIA MEDICA AND PHARMACY.

9. *Veratrum Viride—Its Natural History and Therapeutic Application.* By ISAAC BRANCH, M. D., Abbeville C. H., S. C.

It is unquestionably true, that more confusion has been introduced into our systems of materia medica, in consequence of the inexcusable ignorance of authors upon the subject of botany, than from all other causes put together. When the properties and powers of a plant have been investigated by an observant and judicious physician, there is very little danger of attributing to that particular plant a property which it does not possess—the danger lies in calling the plant by a wrong name, either generically, specifically, or vulgarly, and these, by misleading others; and when an error of this kind has once found its way into the books, it is next to impossible to eradicate it. We could give many instances of this kind, by way of illustration, but for the present one or two must suffice. Until quite recently, almost every writer on materia medica has used the terms conium and cicuta, interchangeably, when every botanist knows that they are entirely different plants, generically and specifically. The mistake and confusion has arisen from the mere circumstance that, in vulgar parlance, they are both called hemlock.

This same error has pervaded our systems of materia medica in regard to the genus VERATRUM, from time out of mind, or at least ever since the genus has found a place in the books. There are three American species belonging to the genus. The V. viride, V. paruiflorum,

and V. angustifolium, all of which grow upon the mountain streams of South Carolina. The veratrum album is not an American plant: it has been confounded with the V. viride, however, even by scientific botanists, as Michaux, and others, who have copied after him, and hence the confusion in regard to the medicinal properties of the latter. Until Dr. W. C. Norwood, of Cokesbury, S. C., investigated the plant under consideration, properties were attributed to it which it never possessed, and which, if it had possessed them, would have rendered it an article of very little value indeed, compared with its real intrinsic merits. It was supposed to be cathartic, a property which the V. album possesses in an eminent degree, whilst the V. viride is not cathartic, in any sense of the word. The veratrum viride is called, in common parlance, American hellebore and Indian poke, names which are calculated to mislead the unscientific. It is not a hellebore at all; and in regard to the latter name, we will simply remark that we wrote to a friend, living some eight hundred or one thousand miles distant, for a quantity of the root of the veratrum viride, about twelve months ago, and when the article came to hand, we found a very pretty quantity of the phytallacca-decandria, or poke root! The veratrum album is called white hellebore, and, in nine cases out of ten, if the veratrum viride is ordered from the city druggists, the real, genuine article will come, but with the label "White Hellebore" on the package; and, in some instances, the name "Veratrum Album" will also be found on the same package. In four packages, recently received from an excellent apothecary, but one of them was labelled right, and still they were all genuine articles—the VERATRUM VIRIDE. We do trust that our city practitioners will look to this matter, and correct the mistake.

The veratrum viride is emetic, expectorant and acrid, and it also possesses other prominent properties, which we hardly know how to characterize. It will control the action of the heart and arteries in nine cases out of ten, to any desired extent, in cases where the patient is not in articulo mortis. It is not an antiphlogistic—a reducing agent, when used as it ought to be—short of the vomiting point, and hence its greatest value consists in its adaptation to asthenic diseases. When used as it ought to be, it reduces the frequency, but never the strength or volume of the pulse. We are aware that it has been regarded as a good substitute for the lancet in phlogistic or asthenic disorders. This is certainly a mistake. The lancet has no substitute in diseases positively phlogistic. As to whether all diseases are phlogistic which are called so, is another question. Most assuredly, the pneumonias and typhoid fevers of the South are not; they are positively and decidedly asthenic, and, in our opinion, never require reducing agents. At the same time, if we were called upon to designate two diseases in which the veratrum viride was best adapted, we should name the two above mentioned. At this particular point, we wish to be understood, and, therefore, will repeat in substance what we have already said. First—The veratrum viride is not an antiphlogistic, or reducing agent, when properly used. A large dose will produce death, however, and so will

a large dose of opium, or brandy, or camphor, and still neither of the latter are antiphlogistics. Second—The veratrum viride is best adapted, as a medical agent, to adynamic, or asthenic conditions of the system. Third—The pneumonia and typhoid fever of the South, for the last ten years, has all been of the character referred to, and it is in cases of this kind to which the remedy under consideration is peculiarly and appropriately adapted. Are any of these positions denied? If so, and the proof is called for, we stand ready to produce it.

For a long time, the European plant, the veratrum album, was supposed to be identical with the veratrum viride of this country. The medicinal virtues of the European plant had been investigated, and as ours was regarded as one and the same plant, it was supposed, as a matter of course, that the properties were identical. The American plant had been used to effect purposes for which the European species had been recommended, and as it had failed, to a great extent, in producing those effects, it had been almost wholly laid aside, and we now unhesitatingly say that Dr. W. C. Norwood, of Cokesbury, S. C., is entitled to the whole credit of calling the attention of the medical profession to the merits of the article; indeed, its peculiar powers were never known, so as to be correctly applied, until he investigated them. We have been utterly astonished, that the intimation has been recently thrown out, that the veratrum viride is a nostrum. It is just about as much a nostrum as opium, camphor, or calomel, and no more.

We will repeat, in a few words, what we said in our last, in regard to the mode and manner of administering the veratrum viride in typhoid pneumonia and typhoid fever. We use it in all stages of these diseases, unless the patient is in articulo mortis. We prepare our tincture in accordance with the formula of Dr. Norwood, and commence, usually, with six drops of the tincture, and a teaspoonful of paregoric, increasing a drop every two hours, until nausea is produced, or the pulse reduced to the desired standard, where we keep it for a few days with more or less of the article, until we break up the disease. We sometimes alternate brandy with paregoric, and use other adjuvants, as a blue-pill, blisters, enemas, sponging, &c., as circumstances require. When used in this way, the remedy is perfectly safe; indeed, we have no fears of producing an unpleasant symptom. We will remark, however, that so soon as we reduce the pulse to the desired standard, we diminish the dose a drop or two, and then regulate it according to circumstances. We have no doubt but a patient may be killed with the veratrum viride, and we have as little doubt but that paregoric may also cause death; but it is a maxim as old as Hippocrates, that "all medicines are poisons in the hands of the ignorant, while poisons are medicines in the hands of the skilful."—*Charleston Medical Journal*, March 1853.

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10. *Lactagogues and Emmenagogues.*

Dr. Cormack has recently made a communication to the Medico-Chirurgical Society of London, on the effects of sinapisms as lactagogues.

He referred to a paper published some time since in *The Lancet*, by Dr. M'William, on the effects of the leaves of the castor-oil and physic-nut plants applied to the mammæ, in promoting the secretion of milk. The application of these had been effectual in some instances in procuring the secretion of milk even in women not pregnant nor suckling. Dr. Tyler Smith had tried the leaves of the castor-oil plant, and the results had been similar to those obtained by Dr. M'William. The plant in question belonged to the natural order *euphorbiaceæ*, and their effects he (Dr. Cormack) considered did not depend upon any *specific* power they possessed, but simply on their stimulating properties. He had been for many years in the habit of employing sinapisms to the mammæ for amenorrhœa. He had first resorted to this mode of practice in Edinburgh about twenty years since, Dr. Patterson, of Dublin, being then in the habit of employing it. He (Dr. Cormack) had constantly used it since, with almost invariably good results. He related some cases in point, chiefly those of bronchitis, occurring during lactation, in which the milk was lost from the antiphlogistic treatment necessary to cure the disease. The milk returned on the application of sinapisms. He had seen it effective in many cases of amenorrhœa, but chiefly in those of the acute kind. In the cases connected with anæmia, iron or other constitutional remedies require to be used. Other stimulating applications to the mamma would have the same effect.—*London Lancet*, May 1853.

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11. *Process for preparing the Sulphate of Iron and Potassa, or Iron Alum.*

Take of peroxide of iron, *nine parts;* of sulphuric acid, *fourteen parts;* of sulphate of potassa, *ten parts;* of water, a *sufficient quantity.* Dissolve the oxide of iron in the acid; add the sulphate of potassa; evaporate until a pellicle forms, and then set the solution aside to crystalize. This salt is an energetic styptic.—*Journal de Chimie Médicale.*

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12. *External treatment of Facial Neuralgia.* By M. Poggioli.

This author having remarked, in his researches upon neuralgia of the trifacial, and the methods for its cure, that a number of analogous sedative substances had better effect when combined, than when employed alone, has framed the following formula, by which he has succeeded in relieving ten cases.

R.	Extracti belladonnæ,	ʒj.
	Morphiæ hydrochloratis,	gr. X.
	Unguenti populei,*	℥ss.
	—— stramonii,	℥ss.
	Essentiæ lavandulæ,	quantum satis sit.

Fiat unguentum.

Bulletin de l'Académie.

* See *Wood & Bache, U. S. Dispensatory*, p. 1371.

STATISTICS.

13. *Statistics of the Deaf and Dumb in Ireland.*

Mr. Wilde has published a very interesting paper on the deaf and dumb in Ireland, as shown in the late census. In all Ireland, 4485 deaf mutes were returned; or (allowing for disturbing causes) 1 in every 1500 inhabitants. The proportion in all Europe is 1 in every 1593 persons. In Ireland it varies in different parts:—1 in 1794, in Leinster; 1 in 1689, in Connaught; 1 in 1487, in Ulster; 1 in 1469, in Munster. It is more common in the rural than in the civic portions; and in the hilly than in the flat districts. Of the whole number, 4151 were deaf and dumb; and of these, 2349 were males, and 1802 females,—or 100 men to 76·61 females. 334 were dumb but not deaf. Deaf and dumb persons do not directly engender deaf and dumb children: thus, in 77 cases, one parent, and 5 instances both parents, were deaf and dumb; only two mute children resulted. Yet muteism is often manifest in several members of a family derived from a common, though not a deaf and dumb stock. Thus, 2512 families had one mute child; 287, two mutes; 127, three mutes; 32, four mutes; 8, five mutes; 3, six mutes; 1, seven mutes; 1, eight mutes. On inquiry, also, it is found that hereditary predisposition from ancestors could be traced in 281 cases; in 149 of which the taint descended through the father's side, and in 132 through the mother's.

Six cases are recorded of deaf, dumb, and blind persons.

Of the deaf and dumb, 744 were educated.

In respect of race, 1198 were Irish, 352 English, and 121 Scotch. As to mortality, out of 291 recorded deaths, 72 were from epidemic, and 135 from sporadic diseases—and of these there were no less than 77 cases of consumption, or 1 to 2·81 of the entire number of specified causes.

An interesting American table of the deaf and dumb and blind, as compared to the entire population in the United States, is annexed, which we extract.

It appears that there are 9422 white mutes in America, in a white population of 19,371,591; and 96 coloured mutes among a free coloured population of 251,205.

	Deaf and Dumb.	Blind.	Insane.	Idiotic.
Whites - -	1 in 2073	1 in 2455	1 in 1295	1 in 1384
Free Coloured	" 2956	" 867	" 1355	" 983
Slaves - -	" 6552	" 2646	"11,011	" 3081
Total Slaves and Free Coloured	" 5730	" 2131	" 5936	" 2461

Journal of the Statistical Society, March 1853.

14. *Report of Interments in Richmond, from April 15th to May 15th.* By A. MICHAELS, Esq. Superintendent.

Ages.	Whites.	Coloured.	Causes of Death.	Whites.	Coloured.
Adults,	23	20	Pneumonia,	10	7
10 to 20 years,	0	6	Consumption,	6	7
Under 10 years,	19	13	Pleuritis,	0	2
Stillborn,	0	5	Catarrh,	0	2
			Dentition,	0	3
Whites.—Males, 18; females, 24,		42	Stillborn,	0	5
			Suicide,	1	0
Coloured.—Males, 22; females, 17; stillborn, 5,		44	Old age,	0	2
			Sudden,	3	0
			Other causes,	18	6
Total,		86	Unknown,	4	10

15. *The Weather in Richmond during the month of April.* By D. TURNER, Esq.

[Being an extract from a meteorological journal kept by Mr. Turner, at his school rooms.]

Month.	Years.	BAROMETER.				THERMOMETER.				Inches of Rain.	Rainy Days.	Cloudiness.	Fogs.	Thunder Showers.	Force of Vapour.	Relative Humidity.	Prevailing Winds.
		Mean.	Maximum.	Minimum.	Range.	Mean.	Maximum.	Minimum.	Range.								
April,	1851,	29.847	30.359	29.324	1.035	57.9	78.0	41.0	37.0	5.46	11	4.5	0	3	-	-	sw.
	1852,	29.610	30.033	29.028	1.005	51.9	82.3	32.5	49.8	6.14	13	5.1	2	3	6.3	68	sw.
	1853,	29.837	30.249	29.098	1.151	56.5	87.0	36.5	50.5	2.53	9	4.6	0	3	7.5	67	sw.

Heavy Rains: On the 4th, .54 inches; on the 16th and 17th, 1.30.
Prevailing Winds: Southwest.
Last frost of the season on the 8th; on the 10th of April last year.

NOTE.—In noting the clouds, 0 signifies clear sky; 10 sky entirely covered. The force of vapour is estimated in millimetres. In estimating the relative humidity of the air, 100 signifies saturation.

EDITORIAL AND MISCELLANEOUS.

Medical Education.

There is no subject of more vital importance to the profession than that of medical education. The attention it has elicited at the hands of general conventions, local associations, and individual physicians, is an evidence of the interest felt in its perfection, and an indication of the desire to erect an honourable and elevated standard of attainment. But what effect can the recommendations and even the direct remonstrances made by associations, have upon the standard of medical education? The power is with the medical schools of the country, and unless associations can make laws for these institutions, their labour is all thrown away, and the schools will continue as heretofore, the source and perpetuation of the evil.

The number and material of the schools is not proportioned to the wants and exigencies of society, (their legitimate end,) but directly to the wants and ambition of aspirants for professorships. A poor man must do something for bread; an ambitious man will do something for notoriety. They both hit upon the speculation of a medical school, which seems to require less talent than anything else, and to involve very little risk. With the temptations they are able to hold out, success is almost certain. The facilities for getting up a medical school are greater than those for starting an ordinary grammar-class. All do not perceive the utility of the elements of education, but no one is so obtuse as not to appreciate the advantages of a diploma, which may serve as a capital in trade.

What number of physicians is required for the absolute necessities of the population of the United States, and what number of medical schools is required for their education? Let the calculation be made, and the result deducted from the present number of physicians and colleges, and the surplus will convey a good idea of the standard and pretended facilities of medical education. Certainly if these facilities were not extraordinary, there would not be such an extraordinary number taking advantage of them. If they be real, medicine is not the

immense science its expounders pretend; and if its requirements are so easily mastered, it will soon become an ordinary accomplishment, and be reckoned among the items of common school education. Unhappily, the amount of pseudo-medicine prevalent in the country would already imply this state of things. This is the reason why society, familiar with the facts, has withdrawn its confidence from the practitioners of medicine, and is disposed to encourage Homœopathy, Hydropathy, Thompsonianism, or any quackery that may be gotten up.

Intelligent men see these things and stand amazed, asking how it is that so much quackery and empiricism has crept into our ranks. It does not creep in. The doors have been thrown open so wide, that the promiscuous multitude rush in with hurried and indecent haste, for there is no preparation, and scarcely any exaction required in passing from citizenship to doctorship. The study of medical science would never make men quacks, but quacks pretend to study it, to get its privileges for a price, and then misapply them with impunity. Two hundred dollars will enable men to purchase titles and privileges that will legalise them in practising their moral and professional baseness anywhere in this land of enlarged liberty.

Do examining Faculties exact a fair and adequate test from students applying for a degree? Take the medical institutions throughout the country,—what is the history of an examination? A student goes before a professor in a particular department; the professor is capable of propounding the most rigid examination, the student equal to the most impartial and searching test. This is fair, and is complimentary to both; but a student may go before another professor, and pass an examination amounting to nothing but a formality. Neither the examiner or the examined know anything about their branch; the professor has not taught, and of course the student has not learned it. Our reasons for this sort of argument are obvious. Under the American collegiate system professors are appointed whose qualifications are tested in no manner whatever. They are selected by partiality, or upon a reputation which may be fictitious, or real, no one being called upon to decide it. In fact, without any election whatever, a body of men, qualified or not, may form themselves into a faculty for any purpose, and yet our legislatures will grant them the right to confer degrees. Under this wholesale and promiscuous system, is there any use in talking about standards of education?

Education is very desirable, and is strictly one of the necessities of

the community. The more facilities offered for its acquirement the better, if these facilities be real. But is not the reverse proverbially true? Are the inducements offered by the colleges often anything more than mere catchpennies? Take the advertisements of these institutions, and it will be found that those having fewest advantages are those that promise most. To such an extent, indeed, has opposition and emulation been carried, that there is far more quackery in the collegiate system, than in the actual practice of medicine itself. With mushroom establishments studding every street, how can it be expected that medical education should be aught else than it is. Of course when the probation is so easy, there will be multitudes seeking the "honours" (as these institutions facetiously term their diplomas). But will these multitudes come from the intelligent and honourable class of the community, to reinforce the profession of medicine by respectable and valuable recruits?

Passing over the iniquitous tendency of the present system of medical education in a professional point of view, we might trace its baneful influences far into the recesses of society. What has been the result of the low standard upon the moral tendencies of the young men of the country? Take a medical class anywhere in the United States, and what does the community think of it—What do its teachers themselves say of it? We will not revive these epithets, but every medical student is familiar with them. What is it that has entailed this discreditable distinction upon medical students?—the fact that the requirements of institutions are so reasonable, that very little of their time is necessarily employed in keeping up with the course of instruction, and the rest is spent as temptation or desire may prompt. What the temptations peculiar to a city are, there is no need of discussing; what are the proclivities of young men away from the restraints of home, is often and most sadly illustrated. Every neighbourhood knows that when a man finds his son debased by every immoral tendency, his last effort at reclamation is in the study of medicine, because he is aware that the title of Physician is a passport through society, and that with this guaranty his son can maintain a position that his character would not otherwise entitle him to. The blame is with the medical schools, who invite him to this subterfuge by offering an easy and rapid passage to titles that only the intelligent and reputable should deserve.

We conclude, then, that the issue is with the medical schools, and that they are responsible for the low standard of education, and the

consequent necessity for reform. But we must remind medical associations that the only reformation which would be effectual is beyond their reach, unless they will consent to become suppliants at our legislative doors, from whence alone the remedy can come. We must be protected by government, or rest forever in the miserable and growing degradation so familiar to us all. The *Law* must make the examining faculty independent of the fees of the student. It is the *suaviter in modo*, and not the *fortiter in re*, which makes an institution popular. No student will go to a school, or recommend his friends there, if the examinations are notoriously harsh, and this is the reason why, when an institution adopts an elevated standard, another springs up at its gates to catch the disappointed and offer them comfort and sure honours in its arms. Such is the influence and success of the latter institution, that the former must come down to an equal grade or close its doors for want of followers.

Let every State encourage medical institutions, and endow them; but let the power of conferring diplomas be taken out of their hands, and given to a body uninfluenced by the temptations to which we have alluded. If this is not done, a few short years will suffice to degrade our profession to such a level that few respectable men will consent to cultivate it. T.

Letter from our Paris Correspondent.

PLACE DE L'ECOLE DE MEDECINE,
PARIS, 17th April, 1853.

I am faithful you see to the promise I made on the steamboat wharf, that if you executed your intention of publishing a Medical Journal, I would contribute regularly to its pages, so soon as I became settled in Paris, and had acquired some knowledge of the principal sources from whence knowledge so abundantly flows in this great city, the capital of learning and science, as well as of dissoluteness, pleasures, and revolutions. You and your partner, Dr. Thomas, are too fresh from the scene to relish an account of the innumerable vexations, trials, and perplexities, which exhaust the temper, and depress the spirits of the stranger in Paris. I forbear then all description of my agonies of mind and body, from the evening an omnibus set me down at Hotel Meurice, until the day I gave my *arrhes* and made the acquaintance of the capped, glassy-eyed, rattling-tongued old woman who keeps my key when I leave my room, and tells me she is there *pour tout faire*.... which I take to mean—to flatter my foibles and filch my fuel. Thank Heaven, though the former may be innumerable, the end of winter is nigh at hand!

I am in the best position for a medical student: on the left hand of my rooms are the *Cliniques*, where Dubois daily lectures, next to that is Lüer, the instrument maker; on the right hand is the Ecole de Medecine, and in the front of my window is Masson's book-shop, behind which are the Dissecting-Rooms, Dupuytren's Musuem and Charrière. Could I be in a better place?

I regret my first letter must needs begin by an inauspicious announcement: the death of M. Orfila. M. Orfila was born on the 24th April, 1787, in Mahon, (Island of Minorca,) upon the isolated rocks of the Baleares; Spain and France both extending their coasts within sight of his native town, and seemed to offer themselves to his choice as his future country. At first destined to a commercial life, he was shipped when fifteen years old as second pilot on a merchantman which sailed between the ports of Spain and France, and Salerno, Alexandria, Smyrna, Messina, and Cagliari; but this life did not agree with his tastes long. From the mathematical sciences which his maritime profession made a necessary study, he was led by degrees to the natural sciences—towards medical science especially. In 1805 he went to Valencia to study medicine. During an excursion to Spain M. Menière made in 1846, he was shown the chamber where the young student studied; he had pointed out to him in the University the hall where he underwent his examinations, and the Journal where his scholastic successes were formally recorded. M. Orfila was with him, and the Dean of the Faculty of Paris saw again, after an absence of forty years, those glorious and dusty parchments—his first quarterings of scientific nobility—with profound emotion.

In the very commencement of his career, M. Orfila manifested that superiority and rectitude of judgment, that impassioned love of truth which distinguished him through life. In Mahon his friends wished to form him to *scholastic disputation*, but he abhorred it, he saw that it would injure his mind, and that science must repose on more solid bases. In Valencia, as presently in Barcelona, he mastered in a few years all that was taught in Spain. It is true, his master, deep in the chemistry of the time of the Greeks and Romans, taught him that air and water were elements. But the names of Lavoisier, of Berthollet, of Fourcroy, were familiar beyond the limits of France to some of the rising generation; the ardent young chemist procured their books and he soon ceased to pay attention to his Gothic instructor. The University of Valencia was accused of incapacity; it was menaced with suppression; to avert this danger it announced a sort of intellectual tournament between its pupils and those of the neighbouring Universities. Orfila was one of the champions of his Alma-Mater; he won the triumph for her and for his master, who could not forbear asking, in his candour: Who taught you all that?—It was not he. This success became public, and the Junta of Commerce in Barcelona, thinking that Spain would one day reap a rich harvest from that fruitful field, sent young Orfila to Paris, to complete his studies of chemistry applied to industry and arts. A miserable pension of 1500 francs was allowed on the condition that he would return to Spain and teach Chemistry and Natural

History. The declaration of war and the incessant hostilities between France and Spain, interrupted all communications between the Junta and its *protegé*. Fortunately for science, M. Orfila had an uncle living in Marseilles, who promised to pay him the pension allowed by the Junta, until he received his diploma, but warned him that when this precious document was won all supplies would cease. M. Orfila secured his medical diploma after brilliant examinations, and immediately opened a private course of lectures on chemistry, to enable him to prosecute his studies. Vauquelin had introduced him into his laboratory, and Fourcroy had confided to him the preparation of some lectures on organic chemistry, and young Orfila soon gained reputation as a private lecturer. The success of his tuition may be ascertained by glancing on the list of his pupils; there will be found Beclard, Jules Cloquet, Chomel, Rostan, Milne-Edwards, and many others now well known to fame. It was in that humble laboratory, he soon laid the foundations of a new science: Toxicology.

When in 1814 war ceased between France and Spain, M. Orfila placed himself at the disposition of the Junta of Barcelona; the latter declared themselves unable to pay a professor, freed him from the obligations he was under to them, and voted him thanks for his conduct. Shortly after this, when Proust the chemist, returned to France, his chair in the University of Madrid was offered to M. Orfila. Before accepting this place, the young Professor deemed it his duty to submit a plan of studies to the government of his native country, capable of furnishing Spain in future with native Professors of Chemistry. He made the adoption of this plan the condition of his chair offered to him. It was not adopted, and M. Orfila remained in France free to follow the career which opened before him, and promised splendid rewards. In 1818 he took out letters of naturalization, which made him a Frenchman. Success was speedily commanded; appointed a corresponding member of the Institute, at the end of a year he was called to a chair of the Faculty of Paris, and from 1819, until Friday, the 4th March, 1853, (the day he delivered his last lecture,) he occupied the chair of Medical Jurisprudence, and (subsequently) that of Chemistry, captivating the close attention of the generations of pupils who have attended the Ecole de Medecine during the last thirty-three years.

The day of his election, Hallé, ill and near his grave, had himself carried to the Ecole; every person present expressed their astonishment and congratulated the illustrious invalid on the amelioration which had taken place in his health:—"Do not deceive yourselves," said he, taking his accustomed seat, "I am no better; but I did not wish to allow an occasion of doing a service to the Faculty in voting for M. Orfila to slip by me." Whereupon the venerable Boyer, the Ex-Surgeon of the Ex-Emperor, said:—"I was undecided how to vote. I am so no longer, M. Orfila has my voice."

It was during this long period of 1819–30 that the lectures of M. Orfila were most brilliant, and secured him European reputation as a medical jurist, and especially as a toxicologist. M. Orfila was the Pro-

fessor *par excellence*. His elocution was easy, his voice well toned and powerful, noble and expressive features, and his manner was far from being cold. No one possessed in a more eminent degree than him the art of elucidating an abstract question, of taking hold of the obscure parts of a theory, of making palpable the connection of phenomena, ideas and principles, and illuminating with the clearest light the very depths of science. Standing before the table where the experiments were made, surrounded by the crowds of students who listened eagerly to him, he exhibited his theme with so much method, his ideas were enchained with such logical precision, his deductions were so clear, his conclusion was irresistible. But if by a marvellous sagacity he saw doubts still existed in the minds of some of his auditors, he retraced his steps, presented his demonstration in a new form and cleared up all shadow of doubt. Lecturing was his passion: instead of giving only the sixty lectures prescribed by the Bye-Laws, he gave eighty, and all of them were a quarter of an hour longer than any other delivered in the Ecole. It may be said with truth, that it was in that vast amphitheatre, whose doors were always besieged by students long before the lectures commenced, M. Orfila enjoyed the glory which touched him most.

Two branches of sciences especially attracted M. Orfila; Medical Jurisprudence and Toxicology. He was in truth the creator of these two sciences, for he classed, constituted, and developed them. I need not say here they are practical sciences of an immense importance. M. Orfila elevated the office of the physician almost to the level of the Judiciary. Who could see, without emotion, if not terror, the sort of infallibility with which he declared the presence of crime in some long putrified body; when he appeared before the Judge as a Judge, before the Jury as an oracle, before the culprit as the avenger of outraged society.

In 1830 the fame of M. Orfila was at its apogee. The Revolution of 1830 had restored to their chairs in the Faculty the professors dismissed by the decree of 1822. The illustrious Antoine Dubois was made Dean. Far from anxious to retain this position, he requested M. Orfila to go with him to the Ministry of Instruction upon some pretext of business. They had scarcely entered the Minister's room, when M. Dubois said:—"Monsieur le Ministre, I am old, I do not wish to retain office, and I have come to beg you to accept my resignation as Dean. Allow me to present M. Orfila to you, I request you to give him the vacant place." The next morning's *Moniteur* contained M. Orfila's appointment as Dean.

A new career now opened to M. Orfila, he became an active administrator while he continued an active professor, and burthened with the labours of these posts he still found time to prosecute his favourite science; his memoirs on arsenic and nicotine are dated the last years of his life. The new Dean rendered important and durable services to the Ecole; he ensured the regularity of the Professors' courses of lectures, and that of students inscriptions and examinations; he had built opposite the Ecole an elegant spacious building for the two

cliniques (surgery and midwifery) where students flock from all parts of the world to receive the lessons of the son of Antoine Dubois. He raised new dissecting rooms where the surest processes of preservation are essayed and employed so that the health of the most laborious students is no longer compromised; he created the Musée Dupuytren, the Botanical Garden, and the Museum in the galleries of the Ecole de Medecine. About this same time he was honoured with seats in the Council-General of the Seine, and in the Royal Council of Public Instruction. Here he was perfectly at home, and he rendered there as elsewhere great services to his adopted country.

The fatal Revolution of 1848, which for four years blasted the prosperity of France, did not spare M. Orfila; he lost all of his places, and his study was violated by low slanders easily refuted so soon as reason resumed the sway, which passion usurped during the revolutionary madness. M. Orfila was too fond of his fame not to suffer acutely from these misfortunes. These wounds bled until the last hour of his life. He sought (not altogether in vain) to allay these pains by renewed ardour in his studies, in the affection of his pupils which never failed him, in the society of his wife and friends, and the brilliant scientific debuts of a nephew whom he loved as a son, and in benevolent donations: he gave before his death 120,000 francs to the Academie de Médecine to found a museum and prizes.

One day in a general meeting of the stockholders of the Chemin de Fer du Nord an important financial discussion arose; M. Orfila made an admirable financial speech, and indicated the solution of the difficulty before them. After his speech M. de Rothschild went up to him, complimented the speech and begged him to become a Director of the Company. It was on leaving a meeting of the board on Saturday, March 5th, during a rainy day, that he was taken with the indisposition which, ending in pneumonia, proved fatal in six days. He desired his body to be opened after death, which was done.

The organization of M. Orfila was singularly endowed. A passionate lover of music, he composed when twelve years old a mass which was publicly executed with applause in the church of his native town. M. Orfila was the most wonderful singer seen in Paris since the death of Garat, and no one whose good fortune permitted them to hear him doubted that if he had gone on the lyric stage he would have been the first of tenors, eclipsed Rubini, and Duprez, gained an immense fortune and no less celebrated name! For the last thirty years M. Orfila had a *soirée musicale* every Sunday night in his house. Although he lived in the Rue Saint-Andre-des Arts his drawing room was one of the most celebrated in Paris, and thronged by the aristocracies of rank, talent, fortune and fashion.

Several speeches were made at his grave; the pupils of the *Conservatoire de Musique* performed his favourite airs at his funeral; and the Musical Profession here are about erecting a suitable monument to his memory. He was buried in the Cemetery of Mont-Parnasse.

The Emperor has appointed M. Paul Dubois the midwife of the Empress. His father was midwife to Marie-Louise.

I have thought these statistics not without interest. They are official.

Temperature of Paris during January. Observations made at the south side of the Observatory. The wind has been 7 times W., 5 times S., 4 times W. S. W., 2 times S. W., 2 times S. S. W., 2 times N., 2 times N. E., 2 times N. W., once S. E., once S. S. E., once W. N. W., once N. N. W., once E. N. E. The sky has been lowering 19 days, cloudy 5 days, very cloudy 2 days; it has rained 2 days, it has been foggy 2 days. The coldest temperature was about the middle of the month being 11.9., towards the end of the month 8.5.

Deaths:—3070 persons; 1569 males, 1501 females, died in Jan'y, being 539 more than in Dec'r. Of these, 272 males and 214 females were less than three months old; between 3 months and 1 year, 91 males, 79 females; between 1 and 6 years, 221 males, 230 females; between 6 and 8 years, 23 males, 18 females; between 8 and 15 years, 37 males, 39 females; between 15 and 20 years, 80 males, 75 females; between 20 and 30 years, 177 males, 172 females; between 30 and 40 years, 128 males, 140 females; between 40 and 50 years, 144 males, 113 females; between 50 and 60 years, 138 males, 122 females; between 60 and 70 years, 112 males, 116 females; betwen 70 and 80 years, 98 males, 119 females; between 80 and 100 years, 48 males, 67 females. January includes 160 deaths of children under 6 years, and 334 deaths of persons upwards of 15 years, more than occurred in December. 196 males, 205 females, died of pulmonary phthisis; 109 males, 139 females, of pneumonia; 98 males, 125 females, of pulmonary catarrh; 140 males, 143 females, of enteritis; 180 males, 105 females, of typhoid fever; 72 males, 40 females, of brain fever; 55 males, 50 females, of apoplexy. 116 males, 95 females, were still-born. 21 boys, 27 girls, of croup; 28 boys, 25 girls, of convulsions; 2 adult males, and 6 adult females; 19 boys, 16 girls, and one female, between 20 and 30 years, of measles; 5 boys, 6 girls under 8 years, 13 males, 10 females and one female of 50, of small-pox; 473 males, 500 females, of divers and unenumerated diseases. 22 males, 7 females between 20—60 years, 1 male and 1 female between 15—20 years and 2 men above 60 years committed suicide. 162 lunatics were sent to the asylums, 67 lunatics were liberated, 43 died. The Prefecture of Police placed in the *hospices* 19 children between 2—12 years; 21 temporarily; 119 below 2 years, abandoned; the *hospices* received directly 7 children between 2—12 years, 48 below 2 years. 16 lost children have been returned to their parents. Of the 119 children below 2 years, 6 have been ascertained to be legitimate, 107 natural, the rest uncertain; 30 were born in the *Maisons Hospitalières*, 39 in the midwives houses. Information was obtained about 101 mothers, 14 are Parisians, 87 from the country, 33 have their parents, 37 are orphans, 12 are motherless, 20 fatherless, 36 have had previously children, 96 declare the fathers of their children have abandoned them, 5 receive aid from them. Among the mothers 14 are linen-seamstresses, 10 seamstresses, 8 day-workers, 3 embroiderers, 39 maids, 1 shop book-keeper.

Temperature of Paris during February. Wind W. 5 days, N. 3 days, N. N. E. 3 days, N. W. 3 days, S. E. 3 days, W. N. W. 2 days, N. E. 2 days, N. N. W. 2 days, S. 1 day, S. W. 1 day, E. 1 day, E. S. E. 1 day, E. N. E. 1 day. The sky was lowering 18 days, cloudy 2 days, very cloudy 3 days, rained 1 day, fog 1 day, clear 2 days, perfectly clear 1 day. The highest temperature was at the commencement of the month, 62° above zero, at the middle of the month 31° above zero, towards the end 60° above zero. The lowest was 6° below zero, 4° below zero, and 6° below zero.

Deaths during the month of February.—3491 persons, 1780 males, 1711 females. Of these 221 males, 229 females below 3 months; 105 males, 71 females between 3 months and 1 year; between 1—6 years 258 males, 242 females; between 6—8 years 28 males, 29 females; between 15—18 years 49 males, 71 females; between 16—20 years 134 males, 106 females; between 20—30 years 268 males, 252 females; between 30—40 years 169 males, 132 females; between 40—50 years 134 males, 112 females; between 50—50 years 132 males, 124 females; between 60—70 years 125 males, 115 females; between 70—80 years 113 males, 149 females; between 80—100 years 43 males, 79 females. Died of pulmonary phthisis 213 males, 209 females; of pneumonia 143 males, 136 females; of pulmonary catarrh 115 males, 178 females; of enteritis 143 males, 143 females; of typhoid fever 345 males, 240 females; of brain fever 67 males, 66 females; apoplexy 62 males, 47 females; still-born 93 males, 97 females; croup 24 males, 18 females; convulsions 41 males, 35 females; measles 22 males, 30 females; small pox 7 males, 16 females; below 8 years, 3 males; between 18—20 years, 11 males; 10 females upwards of 20 years; divers and unmentioned diseases 483 males, 539 females. Suicides 8 males, 3 females—164 Lunatics were sent to the Asylums, 144 lunatics liberated as cured, 56 dead. The Prefecture of Police sent to the *hospices* 106 children, 18 between 2—12 years, 88 above 2 years; the *hospices* have received directly 10 between 2—12 years, 45 below 2 years—total 161. 11 lost children were returned to their parents. Of the 88 young children, 23 were born in the *Maisons Hospitalières*, 30 in the midwives houses. Information was obtained about 76 mothers, 11 are Parisians, 65 born in the country, 17 have their parents, 13 are motherless, 21 fatherless, 25 orphans, 18 have had previously children, 31 are maids, 11 seamstresses, 6 linen seamstresses, 4 day workers, 3 *bottine* stitchers.

This is all I have been able to collect this month, for I am still dizzy with the foreign *jabbering* I hear around me, the strange sights, and stranger smells. You will think I am still too much of a

PORTSMOUTH M. D.

Meeting of the American Medical Association.

The sixth annual meeting of this Association took place in New York, on Tuesday, May 3d, the President, Dr. WELLFORD, in the chair. About 500 members were present, and it was thought that many more were in town, who had not registered their names. The delegates were welcomed by Dr. STEWART, chairman of the Committee of Arrangements, on behalf of the profession in New York. All of the States were represented with the exception of Florida, Mississippi and California. The committee on Nominations reported the following officers for the ensuing year: *President*, Dr. JONATHAN KNIGHT, of Conn.; *Vice-Presidents*, Drs. USHER PARSONS, of R. I.; LEWIS CONDICT, of N. Y., HENRY R. FROST, of S. C., R. L. HOWARD, of Ohio.

The President, Dr. WELLFORD, then read a long and able address, reviewing the progress and benefits achieved by the association. The information contained in this admirable document, was most valuable, and the opinions expressed in it in regard to reforms in medical education, the separation of the teaching and licensing power, the necessity for vital statistics, and other equally important subjects, are calculated to exert the best effect. The association was fully sensible of the merits of this address, and voted unanimously that it should be published in the Transactions of the Association. This is the first time that this honour has been conferred.

The following reports were presented:—"A report on Acute and Chronic Diseases of the Neck of the Uterus," by Professor C. D. MEIGS, of Philadelphia. This report will appear in the Transactions, with numerous and costly illustrations. "A report on Toxicological and Medicinal properties of the Cryptogamia," by Dr. PORCHER, of Charleston. "A report of Typhoid Fever," by Dr. CAMPBELL, of Georgia. "A report on the Epidemics of Kentucky and Tennessee," by Dr. SUTTON, of Kentucky. "A report on Medical Education," by Dr. PITCHER, of Michigan. This paper was read at length. It was a most unsatisfactory document. It was chiefly an eulogy upon the University of Michigan, which, it appears, has instituted a seven months course of lectures, and requires attendance upon two of these courses, and *two years' study*, from candidates for a degree. There are no clinical advantages at this school, the best element of medical instruc-

tion being entirely wanting. In order to palliate this glaring deficiency in the institution with which he is connected, the Reporter proposed among others the following strange resolution, which was adopted by the Association with scarcely a dissenting voice:

"*Resolved*, That in the opinion of this Association, a thorough and familiar knowledge of the elements of Medical Science should *precede* clinical instruction ! !"

The next report was by Dr. GROSS, of Kentucky, "On Malignant Diseases," which was referred to the Committee of Publication. Dr. G. EMERSON, of Philadelphia, presented a report on "The Agency of the Refrigeration produced by the Upward Radiation of Heat, as an Exciting Cause of Disease," which was equally referred. Dr. N. S. DAVIS, of Illinois, read at length his report "On Medical Literature."

The Committee on Prize Essays, reported that they had received fifteen papers, which they had critically examined, and that the two prizes of one hundred dollars each, had been awarded to the essays with the following titles: "The Cell—its Physiology, Pathology, and Philosophy," with the epigraph "*Natura in minimis maxima est.*" "The Surgical Treatment of certain Fibrous Tumours of the Uterus, heretofore considered beyond the Resources of Art," with the motto, "*Palmam qui meruit ferat.*" The seals being broken, it was announced that the author of the first essay was WALDO J. BURNETT, M. D., of Boston, and that the other successful essayist was W. L. ATLEE, M. D., of Philadelphia.

We come now to the measures of medical reform brought before the Association. It was moved that Dr. WELLFORD'S suggestions touching the licensing power, should be referred to a committee, who should bring the matter fairly before the profession, and, if necessary, memorialize the legislatures of the several States to carry out the wishes of the Association. Immediately there was a professorial onslaught, and the subject was laid upon the table.

It was then moved that no delegates be received in the Association from medical schools, which give two courses of lectures annually, each of which counts towards a degree. Again there was a flutter among the ranks of the lower orders of professors, who teach (!) all the year round, and, on motion of Dr. ATLEE, of Philadelphia, the resolution was laid upon the table.

In this connection, Dr. SAMUEL JACKSON mentioned an instance of a mechanic of Phœnixville, Pa., who had unsuccessfully attempted the

vocations of cabinet-maker and grog-shop keeper, and had subsequently practiced, with popularity, as a Thompsonian quack. It was suggested to him that it was desirable that he should possess a diploma. He left his residence, and returned in one week, with the diploma of a Philadelphia Medical School. In reply to interrogations from various delegates, the eminent professor stated the name of his informant—a respectable practitioner of Phœnixville, and the name of the institution by which this diploma was granted,—the Philadelphia College of Medicine, commonly known as "McClintock's School." Dr. BRYAN announced himself as the representative of this institution, but no motion was made to deprive him of his seat.

Various efforts were then made to induce the Association to recommend Medical Schools to require their graduates to subscribe to a pledge to submit to the revocation of their diplomas upon conviction of having knowingly violated the Code of Ethics of the National Association. There was such an entire absence of concert among the friends of reform, that these efforts were easily frustrated.

The subject of amendments to the Constitution now came up, and the delegates from Virginia presented the resolutions of the Society of that State, urging such changes in the Constitution, as should exclude from representation in the Association, all colleges and schools which do not conform to its recommendations on the subject of medical education. Dr. STEVENS, of New York, moved the indefinite postponement of all amendments, and it was decided that this motion was not debateable. Accordingly, it was carried by a triumphant majority, and the schools are left to the tranquil pursuit of their glorious objects for another year.

In thus reviewing the late session of the American Medical Association, and arriving at the painful conviction that it accomplished nothing of importance or value on that occasion; that, on the contrary, its deliberations have had an injurious effect, in showing its impotence to effect those radical reforms expected of it, we desire to impress upon our readers the necessity for active and individual exertion in behalf of the interests of the profession. The voice of public opinion will be far more effectual in suppressing the evils which beset us, than the unheeded remonstrances of associations.

We know that it is far easier to tear down than to build up, to point out defects than to correct them, and our expectations of improvement are not very sanguine. Still, we believe it is in the power of indivi-

dual physicians, by properly cultivating the noblest and most useful of human pursuits, by jealously guarding against every temptation which can lower the dignity of their calling, by refusing to receive students whose character, or want of preliminary education, unfit them for scientific studies, to elevate their profession in their own eyes, and in the opinion of the world. O.

BIBLIOGRAPHICAL RECORD.

I. *The Action of Medicines in the System, or, "On the mode in which Therapeutic Agents introduced into the stomach produce their peculiar Effects upon the Economy;"* [Being the Prize Essay to which the Medical Society of London awarded the Fothergillian Gold Medal for 1852.] By F. W. HEADLAND, B. A., M. R. C. S., &c. 8vo., pp. 560. Philadelphia: Lindsay & Blakiston. 1853.

It is a common remark that notwithstanding all that has been written on the subject, no work exists in our language which may serve as a trustworthy guide, in the department of Therapeutics. The treatises of Dr. Chapman and A. T. Thomson do not represent the views at present entertained in regard to the action of medicinal agents; the systems of Young, Duncan, Murray and Eberle have passed into desuetude; the admirable work of Trousseau has not been translated; the Pharmacologia of Dr. Paris though valuable, is too general and brief; and the meagre details contained in the volumes of Materia Medica, and in the systematic treatises on Medicine, are by no means satisfactory.

It is, therefore, with great pleasure that we announce an essay, in which the difficulties which surround this subject are fairly met, and discussed with scientific accuracy and precision. Mr. Headland's book, if it does not completely supply the deficiency to which we have alluded, is certainly a step in the right direction. The author has shown how many of our hypotheses are based on bare assertions and ill-sustained analogies, and he has carefully arranged the knowledge supported by logical proof, and placed the present views of therapeutists in a clear light.

Mr. Headland has arranged his views on the action of medicines in ten propositions, a method of treating the subject which is distinct and intelligible, since it may be easily seen in any case whether his data are faulty, or his deductions unwarranted by his premises.

The first proposition affirms:—

"That the great majority of medicines must obtain entry into the blood, or internal fluids of the body, before their action can be manifested."

Of this there are four proofs; thus,—

"1st. When introduced at another part of the body, a medicine acts in the same way as when placed in the stomach. 2ndly. It is found by direct experiment that a poison will not act through the medium of the nerves only, but that its passage in the blood is required. 3rdly. The last and most conclusive argument to show that medicines pass out of the stomach into the system, is that they have actually been detected by chemists not only in the blood, but in the secretions formed from the blood."

The five following propositions lay down:—

"*Proposition* 2. That the great majority of medicines are capable of solution in the gastric or intestinal secretions, and pass without material change, by a process of absorption, through the coats of the stomach and intestines, to enter the capillaries of the portal system of veins.

"In the stomach there is (the author observes) in contact with the substance just introduced, a thin watery secretion containing acid and a matter called pepsin; this is the gastric juice. A large number of medicines are soluble in water; they are dissolved in this fluid. Some others are soluble in dilute acids; they too are dissolved here. Albumen, and matters like it, are reduced to solution by the action of the pepsin. But there are some few mineral bodies, and many vegetable substances, as fats and resins, which cannot be thus dissolved by the juice of the stomach; they are soluble, more or less, in a weak alkaline fluid; and such a fluid is the bile, which is poured out into the first portion of the intestine.

"*Proposition* 3. That those medicines which are completely insoluble in water, and in the gastric and intestinal juices, cannot gain entrance into the circulation.

"*Proposition* 4. That some few remedial agents act locally on the mucous surface, either before absorption, or without being absorbed at all. They are chiefly as follows:—

a. Irritant Emetics.
b. Stomach Anæsthetics.
c. Irritant Cathartics.

"*Proposition* 5. That the medicine, when in the blood, must permeate the mass of the circulation, so far as may be required to reach the parts on which it tends to act.

That there are two possible exceptions to this rule:—

a. The production of sensation or pain at a distant point.
b. The production of muscular contraction at a distant point.

"*Proposition* 6. That while in the blood the medicine may not undergo changes, which in some cases may, in others may not, affect its influence. That these changes may be of *combination*, as of an acid with an alkali; *reconstruction*, when the elements of a body are arranged in a different way, as when benzoic is changed into hippuric acid; or of *decomposition*, as when the vegetable acids are oxidized into carbonic acid."

Having considered the preliminary question as to the mode in which medicines enter the economy, the author discusses the main question—how they operate in the cure of disease. The following classification

of drugs, founded upon their supposed mode of action, is that adopted by the author.

CLASS 1.—HÆMATICA.

Division 1.—*Restaurantia.*

Ordo 1. Alimentia.	*Ordo* 4. Tonica.
" 2. Acida.	" 5. Chalybeata.
" 3. Alkalia.	" 6. Solventia.

Division 2.—*Catalytica.*

Ordo 1. Antiphlogistica.	*Ordo* 5. Antiscorbutica.
" 2. Antisyphilitica.	" 6. Antiperiodica.
" 3. Antiscrofulosa.	" 7. Anticonvulsiva.
" 4. Antiarthitica.	" 8. Antisquamosa.

CLASS 2.—NEUROTICA.

Division 1.—*Stimulantia.*

Ordo 1. Stimulantia Generalia.	*Ordo* 2. Stimulantia Specifica.

Division 2.—*Narcotica.*

Ordo 1. Inebriantia.	*Ordo* 3. Deliriantia.
" 2. Somnifera.	

Division 3.—*Sedantia.*

Ordo 1. Sedantia Generalia.	*Ordo* 2. Sedantia Specifica.

CLASS 3.—ASTRINGENTIA.

Ordo 1. Astringentia Mineralia.	*Ordo* 2. Astringentia Vegetabilia.

CLASS 4.—ELIMINANTIA.

Ordo 1. Sialogoga.	*Ordo* 4. Cholagoga.
" 2. Expectorantia.	" 5. Diaphoretica.
" 3. Cathartica.	" 6. Diuretica.

The four last propositions explain the general mode of action of these four classes of therapeutical agents.

" *Proposition* 7. That a first class of medicines called hæmatics, act while in the blood, which they influence. That their action is permanent:—

1. That some of these, called *restoratives*, act by supplying, or causing to be supplied, a material wanting; and may remain in the blood.

2. That others, called catalytics, act so as to counteract a morbid material or process; and must pass out of the body.

" *Proposition* 8. That a second class of medicines, called *neurotics*, act by passing from the blood to the nerves or nerve-centres, which they influence. That they are transitory in action:—

1. That of these some, called *stimulants*, act so as to exalt nervous force in general or in particular.

2. That others called *narcotics*, act so as first to exalt nervous force and then depress it; and have also a special influence on the intellectual part of the brain.

3. That others, called *sedatives*, act so as to depress nervous force in general or in particular.

" *Proposition* 9. That a third class of medicines, called *astringents*, act

by passing from the blood to muscular fibre, which they excite to contraction.

"*Proposition* 10. That a fourth class of medicines, called *eliminatives*, act by passing out of the blood through the glands, which they excite to the performance of their functions."

In this brief analysis we are able only to present the principles which our author lays down; our readers must seek for themselves the arguments adduced in proof of them, and we can assure them that they will be well repaid for doing so.

In the fourth and last chapter of the work some of the more important medicines are considered separately, either on account of their individual interest, or in consequence of their illustrating the general principles previously described.

In conclusion, we have only to repeat, that this is a highly scientific and valuable work. It is reprinted in good style by the American publishers. It is for sale by A. Morris, Esq., and the Messrs. West.

II. *A treatise on Auscultation and Percussion.* By Dr. JOSEPH SKODA. Translated from the fourth edition, by W. O. MARKHAM, M. D., Assistant Physician to St. Mary's Hospital. 8vo., pp. 349. London: Highley & Son. 1853.

In the course of our critical avocations we have met with few books which have impressed us more favourably than this. Too frequently our attention is attracted by glaring marks of hurried composition, or inaccurate reasoning, or by whole passages copied from preceding writers. Dr. Skoda is an author of a very different stamp. For many years he has held a high position in Germany as a clinical teacher, and as an authority upon the subject of auscultation and percussion; his work bears the impress of originality, and his principles, whether correct or not, are the results which an independent and reflective mind has deduced patiently, and by long investigation of the phenomena of disease, in one of the most extensive hospitals in the world.

The doctrines contained in this treatise, have been brought prominently before the profession in England in the excellent lectures of Dr. Davies, and in France they have attracted great attention for several years. Piorry, Barth, and other masters of the art in that country, while dissenting from Skoda, always refer to his views with the greatest respect.

On many important points Skoda is totally opposed to Laennec. He rejects the French physicians account of bronchophony, ægophony and pectoriloquy, and his interpretations of many of the râles. He dissents entirely from the commonly received opinions in regard to percussion, and expresses many novel views on this subject. We do not intend to enter into any examination of the particular doctrines which Skoda holds; they must be studied *in extenso*, before they can be fairly appreciated. Our object is simply to call the attention of the profession to a work which we consider the most valuable treatise on auscultation which

has appeared since the time of the great Laennec—to the work of a deep and original thinker, and a most careful and clear-sighted observer, who, with vast experience, manifests the rare quality of a will to subject theory to the results of practice and experiment.

Our author has done good service by attempting to reduce to their real value the signs of auscultation. He rejects the endless subdivisions, and the minutiæ of detail, by which some writers have encumbered this speciality. He refuses all classifications which cannot be verified at the bedside. He has simplified the subject, and pruned it of its Gallic exuberances. Whatever is not clear and manifest, is classed by him as indeterminate, and as valueless, so far as drawing practical conclusions from it is concerned. It is remarkable to see a master of his art, unrivalled in his powers of diagnosis, constantly warning his readers, when they have obtained all the information which auscultation can afford, still to pause, and before concluding their diagnosis, to use every aid which other sources can supply. If this wise scepticism was more general, we should not hear old physicians laughed at for their careful study of the rational symptoms of thoracic disease; and professed auscultators would less frequently have occasion to do penance for their blunders, revealed by the knife of the anatomist, or by the obstinate longevity of those whom they had pronounced incurably diseased.

The work is perfectly lucid and simple; there is none of the idealogy and mysticism which render many German works incomprehensible. The English version is elegantly expressed, and we feel confident that Dr. Markham will receive the thanks of the profession, for having introduced them to Dr. Joseph Skoda, of Vienna.

III. *Remarks on Osteo-Aneurism, with a Case involving the Condyles of the left Femur.* [With two Plates.] By J. M. CARNOCHAN, M. D. New York. 1853.

This pamphlet, which is reprinted from the N. Y. Medical Gazette, contains quite a complete historical summary of observations upon the somewhat rare disease of aneurism of bone, and the details of a case upon which the author has operated.

The patient was an English woman, aged 35. Sixteen months before admission she had received a severe injury from a fall upon the knee. Eight months after severe pain and slight tumefaction appeared. At the time of admission (13th April, 1852,) a hard pulsating tumour occupied the place of the condyles of the femur. There was a distinct *bruit de soufflet* over the entire tumour, unlike the cases collected by Nélaton, who has studied this subject more carefully than any one else, and declares that the aneurismal souffle is always absent.

Compression was tried without effect, and on the 19th of June, Dr. Carnochan applied a ligature to the femoral artery an inch below the origin of the profunda. The pulsation ceased, the pain diminished and the tumour appeared to collapse; the patient was discharged on August

10th. In September she returned, the tumour having enlarged and the pain become intolerable. At her request the limb was amputated.

The sac was found to be chiefly composed of the external bony plate of the inner condyle expanded and attenuated. The osseous layer was not altogether continuous, the sac being formed in some places by thickened periosteum.

We believe that the operation of ligature has never been successful in these cases, unless in the case of M. Roux, which he lost sight of, and was therefore unable to speak positively of the result. When the aneurism exists in a limb, amputation is the inevitable resource.

IV. *Dental Physiology and Surgery; A course of Lectures delivered at the Middlesex Hospital School of Medicine.* By JOHN TOMES, Surgeon-Dentist to the Middlesex Hospital. Philadelphia: Lindsay & Blakiston. 1853.

While, in the prospect of the passage of an international copyright law, the work of pirating English books goes on apace, it is really satisfactory to meet an occasional instance of magnanimity and common justice among our publishers.

On several previous occasions, Messrs. Lindsay and Blakiston have imported large English editions of medical works, and sold them at less than the English price, rather than violate the author's rights, by reprinting without his sanction. This respect for equity and moral right, unsustained by legal enactments, entitles these publishers to the support of those of our profession who are governed by similar principles.

Will a Faculty, which professes to be actuated by liberal feelings, "if asked to add one-tenth to their book-expenses for the sake of the authors, hesitate a moment? Who will not read his books with more satisfaction, from knowing that the author is paid, and in comfortable circumstances, and ready to produce another and better book?"—(Putnam.) Who among us will say—"We have your book, and have read it, and you have no legal right to demand a penny. Therefore we will pay nothing." And yet, practically, we all defraud English authors by encouraging publishers in the nefarious practice of plundering their books.

It is always with sadness that we take up the pirated edition of an English work, with the name of some distinguished medical man upon the title-page—a man, perhaps, capable of producing a better book himself, but who has assumed this ignoble office because he can find no publisher ready to reward him for his labour, while foreign books can be reprinted without expense, and without incurring the penalty of the law.

As a result of this state of things American medical literature consists of periodicals, containing gratuitous contributions; of a dozen standard works, whose authors were never adequately paid; and of a

few translations, for which the meagre compensation scarcely defrayed the expense of the ink and paper of the manuscript.

The work which has suggested these reflections is a collection of lectures on Dental Surgery, beautifully printed and elegantly illustrated by more than a hundred wood engravings of rare excellence. Those who have not access to Owen's magnificent monograph, will find here an excellent summary of the opinions entertained by the best authorities, in regard to the structure and physiology of the Teeth, besides a complete history of the diseases of these organs, and the surgical manipulations required by them. We can recommend the work not only to those occupied with this speciality, but to all who desire to obtain information upon the subject, as one of the best treatises which have been written upon this branch of science.

V. *A Treatise on General Pathology.* By Dr. J. HENLE, Professor of Anatomy in Heidelberg. Translated from the German, by Henry C. Preston, A. M., M. D. 8vo. pp. 389. Philadelphia: Lindsay & Blackiston. 1853.

The publication of this work in an English dress appears to us unwise. To those unacquainted with German literature the translation is as unintelligible as the original would be. The tendencies of the German mind are so inherently different from our own; their method of treating a metaphysical or abstract subject appears so strange to us, that their works, many of them at least, even when rendered into English, and divested of their strange idioms and peculiarities of construction, still remain mystical and obscure.

We are far from being ungrateful for the many acquisitions made by medical philosophers of Germany, who have devoted themselves, with indefatigable diligence, to rigourous scientific enquiry. In the exact departments of our science these unwearied seekers have achieved most glorious results. But when, as in the work before us, they discuss Life, and Disease, and Death in the abstract, or approach the difficult subjects of Predisposition and Sympathy, the American reader, unimbued with their philosophy, becomes completely bewildered. Accordingly we fear that the majority, in perusing this work of Dr. Henlé, with its vague asseverations, its unmeasured sentences, and mystic phrascology, will consider it a slice of chaos, rather than "the best modern work on General Pathology."

The work commences with an historical review of medical systems, which is not without interest. This portion of the work is intelligible, though not remarkable for its fairness. The following is the notice taken of the researches of Liebig:—

"Already in the school of Liebig, which is as ignorant of modern improvement as of the earlier errors of our science, medicine is again metamorphosed into one of those crude humoral theories which, spreading like contagion, have hitherto followed after each chemical discovery. Not even the teleological vital force would be left to us; because Liebig understands

as well as his predecessors, how to draw out from the fine tissue of organic life a few threads, in the shape of chemical processes, and then to offer us the tangled skein as the share of vitalism. A host of weak eclectics praise him, that they are permitted to establish themselves once more in their inherited ideas, which they had feared they must abandon."

The subject of General Pathology is then considered in four sections. The first treats of the nature of disease; the second of etiology; the third of semeiology; the last of the relations of disease with regard to time. We must refer those desirous of learning the author's method of treating these topics to the work itself. We will give one more specimen of his style. He is speaking of the opponents of Paracelsus :—

"To this class belonged Van Helmont. The progress which theory made through him, consisted in extolling the dualistic principle, in recognizing the effect of mortific causes (not of the disease itself) upon the *archeus*, and in explaining all the phenomena of disease from its disturbance, from an abnormal idea, indwelling in the *archeus*. If Van Helmont's *archeus* is more anthropomorphous than &c., &c.

The translator has shown little good taste either in his preface or translation. He commences by denying the existence of any standard work on General Pathology in our language. Without admitting or discussing this point, we can assure the translator that he has not supplied the desideratum. His jewels are presented to us in such a rough state; his needles are enclosed in such a large bottle of hay, that very few will undertake the labour of getting at them.

MEDICAL NEWS, ITEMS, &c.

The friends of the University of Pennsylvania, will hear with the greatest satisfaction, of the appointment of Dr. Joseph Leidy, to the chair of Anatomy, left vacant by the death of the lamented Professor Horner. Dr. Leidy's reputation as a philosopher, and as a diligent labourer in the cause of science, is perfectly well established.

Dr. Bennett Dowler, of New Orleans, has issued a circular setting forth the necessity of an Academy of Natural Science at the South, analogous to the Academy in Philadelphia, which reflects so much honour upon its founders. In reviewing the history of this model institution, Dr. Dowler alludes to the Professors of the Philadelphia Medical Schools in a manner which is certainly not laudatory. These "Professors, he says, who get into the most lucrative offices, by accident, fortune, favouritism, corruption, intrigue, or even honesty and scientific merit, are exactly the men, with few honourable exceptions, who become drones, and contribute least to the advancement of science. . . . . If science had no better friends than they, it would have retrograded, and the Academy of Natural Sciences, not having been designed for a money-shop, would never have been built."

NECROLOGY.

It is our melancholy duty to announce the demise of Dr. Robert James Graves, of Dublin, who died on the 20th of March, at Merryon Square, Dublin, at the early age of 56. By his death the Irish school has lost one of its brightest ornaments, and the cause of medical science, a powerful auxiliary.

Dr. Graves graduated at the Dublin University in 1823, and having visited the principal continental schools he commenced the practice of medicine in Dublin. Being elected soon after one of the physicians of the Meath Hospital, he entered with zeal upon the duties of a clinical teacher. He took part in the formation of a private school, and lectured on medical jurisprudence, and subsequently upon pathological anatomy. The Meath Hospital was, however, his great field of labour; he here systematized and improved the plan of instruction by the bedside, and caused the immense importance of clinical teaching, as a branch of medical education, to be fully recognized.

In 1827, Dr. Graves was elected Professor of the Institutes of Medicine to the King and Queen's College of Ireland, a post which he filled with great distinction until his death.

The various monographs and detached papers which constitute Dr. Graves' contributions to medical literature, as well as his "Clinical Lectures," edited by Dr. Gerhard, are familiar to the profession in America. The essays upon the treatment of fever, are particularly valuable, and, we are told, the author took no little pride in the reforms introduced in consequence of the promulgation of his views on this subject. Dr. Graves also lent his valuable support to the establishment of periodical medical literature in Ireland. He edited one volume of the *Dublin Hospital Reports*, and succeeded Sir Robert Kane, the eminent chemical philosopher, as editor of the *Dublin Journal of Medical and Chemical Science*, of which the present *Dublin Quarterly Journal*, is the offspring.

Dr. Graves was a clear and earnest lecturer, and a powerful writer. He enjoyed a lucrative practice, and was in great demand as a consulting physician. He was a great contagionist, and vigorously opposed the doctrines of non-contagion advocated during the last visitation of cholera.

His last illness was attended with much suffering; violent paroxysms of cough, congestion of the lung, and subsequently symptoms of a purpuric condition of the blood, accompanied by anasarca, were manifested. These sufferings were borne with Christian fortitude and entire resignation.

Besides his professorship and post at the Meath Hospital, Dr. Graves was physician to St. Patrick Dun's Hospital. He was fellow of the Royal Society and of the Royal Irish Academy, Honorary Member of the Royal Medical Society of Berlin, of the Imperial Medical Society of Vienna, and of the Medical Societies of Hamburg, Tubingen, Bruges, Montreal, etc.

Dr. William Beaumont whose experiments on Digestion conducted upon the Canadian, Alexis St. Martin, are so widely known, died on the 25th of April, at St. Louis.

Dr. Beaumont was a native of Lebanon, Conn., where he was born in 1785. In 1812, after studying medicine at St. Albans, Vermont, for two years, he joined the Sixth Infantry as an Assistant Surgeon. For more than twenty years he was a member of the medical staff of the Army, being stationed at various points on the Northern frontier. In 1830, he was stationed at Jefferson Barracks, and subsequently at St. Louis. About this time he resigned his commission, and resided in St. Louis, where he enjoyed an extensive private practice. A severe fall, producing serious contusions upon the back of his head, is supposed to have been the cause of the illness which resulted in his death.

It was long the earnest wish of Dr. Beaumont to resume his experiments upon St. Martin, who is still living, in good health, in Canada. He made an attempt to re-engage the latter a short time since, but his hopes were frustrated.

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL

FOR JULY 1853.

ART. I.—*Periodical Exanthematous Attacks and other Disorders occurring with the Catamenia, considered in connection with the Toxæmic Hypothesis of Hysteria.* By J. F. PEEBLES, M. D., Petersburg, Va.

The occasional association of many forms of the exanthemata with the menstrual period has not escaped the notice of medical observers.

The connection, however, is only mentioned incidentally by authors. We have not found, so far as our researches have extended, any attempt to trace this blending so as to show the connecting link between the disease and the natural function; on the contrary it has appeared that most writers discredit the connection. Our observations have led us to a different conclusion. We are disposed to believe that an intimate relationship exists between the exanthematous, and those other associated disorders to be hereafter pointed out, and the menstrual effort which they accompany. Moreover, from observations in regard to the general health of such women, in whom these several affections occur in connection with the catamenia, when contrasted with others similarly situated in all other respects save that of having these coexisting diseases with menstruation, we have been led to infer that they have a peculiar significance, which it is the object of this article to endeavour to portray.

We shall first briefly bring forward the facts upon which we ground our belief of the relationship between the catamenia and these disorders which periodically appear with the effort.

These have been collected chiefly from our own observation, but we will avail ourselves of such others as we have found mentioned by those authors we have at hand for reference.

We have observed the following affections to occur periodically with the catamenia: 1, exanthematous diseases; 2, abscesses; 3, diarrhœa. The exanthematous affections most common under such circumstances, are: 1, urticaria; 2, erythema, particularly e. papulatum; 3, erysipelas.

The occasional occurrence of urticaria with menstruation is mentioned by authors, yet it has been generally considered only as an accidental complication. We have had, however, such opportunities to trace the connection as to fully satisfy us of the dependence of the one upon the other. The following facts in the history of one case, which we should remark is but the type of others which we have seen, will we think be sufficient for our purpose. We select this case because it is one which we have had an opportunity of watching for ten consecutive years. During all this time the woman has exhibited the connection of urticaria with her menstruation, in a manner too decided in our opinion to admit of doubt. The attacks of the exanthem, creating often considerable febrile excitement, have set in with the menstrual flow, and have disappeared with its cessation. In no instance in this woman has this disease ever appeared at any other time. It is true urticaria did not appear at every return of the menses, yet the patient esteemed herself fortunate if she missed two periods without it. In all the time mentioned she has enjoyed exemption for three consecutive periods but twice.

But this is not the most frequent exanthem which we have found to be periodical with menstruation Erythematic eruptions, particularly e. papulatum are far more common. Many women it has long been observed are affected by this efflorescence at such a time. The clusters may form form on the mouth, the cheek, or on the mammæ. We have met with many decided and interesting examples of this connection. We have seen it in a woman who, for as many as 15 years, has been harassed by a large cluster on the right arm near the insertion of the deltoid muscle, appearing at nearly every monthly period. Its onset is often preceded by fever, and it is surrounded by an

inflamed areola, not unlike vaccination. This person recognizes herself the connection of this eruption with her monthly period, and although, at first it created apprehension, she soon began to look for it with her returning catamenia.

In another we found the locality of a similar eruption to be at the lower end of the spine, where it appears to follow the same law in every respect, as the one just mentioned. Further examples might be given of this form of eruption, appearing at such a time in other parts of the body, but the above are sufficient for our purpose.

In regard to erysipelas, we have not ourselves observed it associated in this way with the catamenia. We have, however, seen a great liability to it in women whose constitutions have been vitiated, in a manner to be hereafter described, by the impaired state of the menstrual effort, which, as we shall see, is attendant on such as have exanthematous affections during the flow of their menses. Dr. Whitehead, however, in his work on sterility and abortion, (p. 126, case xv.) mentions an instructive case, going far to establish such a connection.

In this case the pains usually indicating their approach were not followed by the catamenial flow, and in three days, the menses being still absent, a severe attack of erysipelas of the throat and face came on, and when the suppression was relieved by appropriate treatment, the exanthematous affection disappeared in "an extraordinary manner."

Periodical abscesses, although not so common, furnish another link in the chain of facts indicating that there is an occasional morbid state of the blood associated with menstruation.

Such abscesses, like the exanthemata appear and disappear with the monthly period.

In one individual, we have seen these abscesses alternate in their location between the vulva and the external ear. Their appearance in the latter place was preceded by a feeling of fullness in the head Rapid inflammation of the lining membrane of the external auditory passage followed, plugging it and interfering with the hearing; finally minute abscesses formed and healed after discharging freely. This state of things continued in this case from time to time for a period of more than two years, so that there could be hardly a doubt of its connection with the menstrual elimination. In many women, it has long been observed, some degree of relaxation of the bowels, accompanies the catamenial flow. The subject has recently received the attention

of Dr. Tilt, who has published an interesting article relating to it in one of the British Journals.

Testimony might be incidentally drawn from many sources going to establish the possibility of a certain degree of perversion in the quality of the blood from retention of the menses, by which the usual bad result which follows such a state appears to be prevented. We shall be content to mention only one instance, which is sufficiently illustrative of our meaning, likewise found in the valuable work of Dr. Whitehead. In this case unnatural obesity took place in a girl whose catamenia were retarded, and which disappeared completely, so soon as their perfect flow became established. Moreover, all practitioners are familiar with the fact, that various cutaneous disorders are often found associated with disordered menstruation.

The above facts, we think, are amply sufficient to establish our position in regard to the relationship between these coincident diseases and the menstrual effort.

Our next step will be an enquiry into the nature of this relationship, by which, in our opinion we shall be enabled to expose the true significance of these symptoms attending the menstrual flow. In order to understand more fully this latter point, it will be necessary to enquire more intimately into the character of these associated morbid processes. These, it cannot fail to be observed are all of a nature tending to the same end in the economy. They all indicate constitutional changes precisely of that character, which it is generally conceded are employed by the natural efforts to rid the system of materies morbi. They indicate blood poisoning, and are but the exponents of constitutional changes, which are intended to remove the toxic element. Taking urticaria as an example, we find that all writers now concede that it is essentially a blood disease. The cutaneous eruption accompanying it, although itself a disease, is an index of a reactionary movement in the system, created by some toxic element in the blood, which it is intended to remove. The same thing may be said of the diarrhœa in such cases, and certainly with great propriety of the coexisting abscesses.

From the acknowledged nature of these coexisting disorders, then, we are led to infer that they constitute a part of a normal reactionary movement in the female constitution which is intended to aid the menstrual effort. That by these several processes, certain materies morbi

are removed from the blood, which without such additional aids, would remain and seriously vitiate the system of the woman.

Not alone upon the character of these processes, however, do we base our assumption of their action in this respect. We are of opinion that additional, and more convincing proof, of their efficacy in this way yet remains to be furnished.

In the medical history of women thus affected, we shall find, that evidence exists of an abnormal state of the uterine functions, and that this state is precisely such as would most likely create and be at the same time relieved by the very symptoms we have been describing. To make our meaning more obvious, we will at once proceed to detail the exact condition in this respect of the class of women in whom we have found these diseases associated with menstruation. This connection may appear in women of all temperaments, but there is remarkable regularity in the time of life of the woman at which it has been found to occur. We have never seen it in a woman under 20, and it may continue until the final cessation of the menses.

As a general rule, it may be said to select for its victims, women who are approximating to the middle period of their uterine activity. We have found it confined to married women, and it is always associated with sterility—that form of it, too, which is clearly due to some pathological state, since another almost invariable peculiarity consists in the fact that the barrenness has suddenly supervened upon one or more conceptions. This latter is the history, in that respect, of all the best marked cases which have come under our observation. It should be mentioned, however, that it has been observed in married women, who had always been sterile. In regard to menstruation, it is in such women always disordered. This disorder may be manifested in various ways. Where it is regular, it is always scant and abnormal in quality, having its elimination attended with much constitutional distress. The periods, however, are most generally irregular, being more frequently delayed than otherwise. Yet it must not be understood that they are chlorotic, generally there is no evidence whatever of any degree of anæmia in these cases.

We have here then two prominent morbid conditions, viz. sterility and disordered menstruation, in the class of women under consideration.

Now these conditions, it must be conceded, usually stamp women with continued defective health. But in those under consideration,

we have invariably found the case to be different. Such women never suffer in their general health. Between their periodical attacks, they not only continue well, but we have in most cases observed a marked tendency to enbonpoint. This fact is the most interesting feature in their history, since it bears so directly on the main point in our enquiry. From it we obtain further proof of the great value of these disorders, associated with menstruation, to the economy of the women.

We assume, therefore, that they really supply a defect in the menstrual process, that they are compensating in their character, and hence are eminently protective of the constitution.

This assumption, as we have seen, is based, first, upon the acknowledged depurative tendency of the morbid processes in question, and secondly, upon the fact that women, in whom they are found to occur, although eminently unfavourably situated for such a result, do in reality maintain unimpaired their general health.

But it may be objected, that the cause would be inadequate to the result; that the apparently slight aid which could be received from such sources, would hardly shield the woman against any potent source of evil to her constitution. To this objection we can oppose an analogy from nature, which in some degree sustains our assumption. We allude to the non-recurrent exanthemata and their co-ordinate disorders. In them, a similar train of phenomena serves to rid the system effectually and perpetually of all the elements upon which their existence depends.

If our efforts to make out our case have been attended with any sort of success, it will be at once perceived that the interest of our subject does not cease here. On the contrary, the whole question has its most important bearing in another direction.

If it is conceded that the exemption which these women enjoy in regard to their general health, is due to the action of the causes above specified, it will not be a very difficult matter to see, that retained excreta may perform an important part in the production of that train of intractible and inscrutible constitutional disorders which afflict women circumstanced as they are in every other respect, save that of having these apparently compensating disorders associated with their menstruation.

The fact cannot be denied that women who are sterile, after a previous pregnancy, and whose menstruation at the same time is disordered, are usually the victims of impaired health, and more or less exhibit

traces of that peculiar train of symptoms generally denominated as hysterical. We have never seen a woman so situated, who remained free from some manifestation of this diathesis, unless as we have said there was some co-existent depurative process associated with her catamenia. We do not mean that they all have hysterical paryoxisms; but as it is well known that the gouty diathesis may exist, so as seriously to vitiate the general health of the victim, without ever creating a local outbreak, so it is inferred that a similar hysterical diathesis may be created and perpetuated, without a paroxysmal manifestation. It cannot, we believe, be denied, by any practical observer, that such a diathesis is invariably found more or less prominent in this class of women, and the question comes up at once from our previous deductions, as to the part which retained excreta performs in its production. The state of the blood, it is well known, influences the menstrual elimination. Under certain circumstances the function is completely arrested, from its poverty in regard to certain elements. On the other hand there are, we believe, strong grounds for assuming that the blood itself may become vitiated—not as in chlorosis by a simple alteration in the relative proportion of its proper elements, but by having superadded to its normal state, morbid matter—through imperfections solely in the menstrual elimination. Suppression, it is acknowledged, is generally accompanied by serious results, but the effect of the habitual partial failure in the thorough elimination of this fluid, in an otherwise healthy woman, and the possibility of the existence of such a state, have not been made so much the subject of investigation. There is reason to believe that a peculiar state of blood-poisoning may, in this way, arise and exist. Furthermore, it is not difficult to see that the effects of such retained excreta may be regulated by the amount of that retention. A sudden retention of the menses in an otherwise healthy woman, as has just been remarked, is a serious matter, but through the normal reaction which it creates, it tends either at the hands of the physician, or by the establishment of some supplementary evacuation, to its own immediate relief. So, as we have endeavoured to show, a more partial failure in the menstrual elimination, may be relieved by natural efforts of the system, through associated depurative actions which the retention of its elements in the blood sets up. Yet we can conceive that an amount of menstrual retention may occur, and be even too limited to set up these changes, or through some imperfection in the vital dynamics they may fail to occur, and yet so poison the blood as to be

the source of much general constitutional disorder. Mr. Paget, in his well known Lectures on Nutrition, has explained the law, which we think governs the operation of such morbific agents. He has shown how necessary it is for each tissue or organ to separate what exists in the blood for its nutrition or elimination, to the integrity of the whole organism. In the event of a failure in this respect, in one organ or tissue, the current of blood passes to other parts unfitted to impart their proper pabulum, because the extra matter with which it has become charged, exerts a repulsive influence to their normal action. It must not be understood that we mean to explain all the phenomena of hysteria, or all the constitutional symptoms affecting the class of women under consideration, in this way; we mean, however, to direct attention to the strong grounds which exist for supposing that retained excreta may be an element in their production of sufficient importance to merit attention in their treatment. The toxic hypothesis of hysteria has been ably advocated by Dr. Laycock and others, with many convincing arguments. Recently, however, Dr. Carter, an English author, in a work on hysteria, has denied that blood poisoning is an element of the disorder, which he contends is one altogether of an emotional character. Dr. Carpenter appears to occupy a middle ground in regard to the question. He contends that the emotional disturbance itself in hysteria exerts changes in the blood, perverting that fluid so as to give it a toxic quality.

We have adverted to these opinions with the view of directing attention to a different and special source of the hæmatic corruption which the facts we have brought forward would seem to indicate. The occasional existence of hysteria in males is not now denied by any observer. Now, we would call attention to the class of men in whom it is found that this disease is most frequent, as furnishing further proof of the probability of the above views, in regard to the possible origin of this disease.

It is in those men who habitually refrain from sexual intercourse that symptoms of hysteria are most prone to appear. Here we have good evidence that the retention of an ordinary secretion or its elements may tend apparently to create the affection.

But to return to the class of women under consideration. We have seen that they suffer from disordered menstruation, and are sterile, that too after one or two early pregnancies, and that they are usually afflicted by a train of constitutional symptoms, curiously corresponding in

all cases. This is the class of women who are said to be "*Nervous;*" and among this class is to be found that dire disorder denominated Irritable Uterus by Dr. Gooch and others, but more recently called Lumbo-Abdominal Neuralgia by M. Beau, Valleix, and other modern writers. To local disease of the uterus or some of its appendages, a large party of pathologists attribute all these symptoms. We have over and over satisfied ourselves of the truth of this proposition by witnessing the prompt good effect of treatment directed to the local disease in such cases. There is nothing in this inconsistent with our view in regard to blood-poisoning, which may exist under these circumstances, but being the result of the local pelvic disease, of course disappeared with its removal. But may not a toxic condition of the blood arise, and become a prominent morbid element in a case in which no appreciable disease of any pelvic organ, other than mere functional derangement, can be found to exist? We believe it can, and this is the reason why we have dwelt so much upon this probable feature in the composition of such diseases; it becoming, under these circumstances, a primary instead of, as in the former case, a secondary element in their history.

In the most inveterate case of irritable uterus, which has ever been under our observation, no change either in the position or in the structure of the uterus, or of its appendages, after repeated and careful examinations, could be detected sufficient to account for the symptoms. The uterus was not the exclusive seat of the morbid sensibility; the vagina, just within the vulva, being equally so; nor was it at all times sensitive. The slightest touch either from a tactile examination, or from coition, induced exquisite pain, long before the uterus was reached. Again, the pains were migratory. They often seized the head, and as frequent a seat was just behind the sternum. When located in either place, or elsewhere, the vagina and uterus could be always touched without pain. The morbid sensation often reverted from one to another location in the same day, and when entirely absent, it could be easily excited somewhere by exercise or violent emotion. Any local point of irritation would always serve as a focus, around which the morbid sensibility would concentrate. Collodion was once applied for an abrasion of the cheek, and the slight irritation which it created was sufficient to induce such severe suffering in the nerves of the part, as to overshadow or obliterate every previously ex-

isting pain. It is proper to mention that, in this case, the suffering was always aggravated during menstruation, and although regular as to time, this discharge was morbidly scant and of an unhealthy appearance. Yet this woman has never exhibited any traces of anæmia, nor has she ever had an hysterical paroxysm.

In another case, in which precisely the same circumstances and state of constitution existed, the motor nerves were most prominently involved, creating frequent attacks, in which involuntary movements, affecting one side at the time, and frequently changing their seat from side to side, without any loss of consciousness occurred, very much resembling chorea. As in the former case, such attacks were easily excited by exercise, mental emotion, and were always more prone to occur during the menstrual flow. In this person no morbid state of the uterus existed, farther than a slight descent of the organ, which, considering that she had borne several children, was hardly to be considered as sufficient to create the symptoms. It is no new thing to attribute morbid nervous sensibility to a vitiated state of the blood. It is in this way that the neuralgia in gouty subjects is accounted for, and also that occurring in malarious poisoning.

The last fact which we shall bring forward, going to show the probable habitual existence of a morbid element in the blood in these cases, on the one hand, and the probability on the other, that it may excite natural efforts in the system of a character likely to effect its removal, is the frequent occurrence of encysted tumours associated with the state we have been describing.

This connection has been noticed by several observers. In two of the best marked cases, both of which have been for many years under our observation, it has occurred. In the case of irritable uterus, above alluded to, the tumour appeared on the neck; in the one referred to as having symptoms of chorea, associated with a precisely similar state of constitution, it formed on the labia majora. In the former case the morbid growth, after slowly obtaining the size of an almond, remained stationary five years, when it suddenly became more active, and in a few months grew to be as large as an orange. From its location, it seriously interfered with the functions of the organs surrounding it, and its removal was effected by the knife. It proved to be an encysted tumour, containing nearly a pint of semi-fluid matter, charged with cholesterine and other elements of such formations.

In the other case, the tumour was also removed by the division and subsequent destruction of the sac. Although its connection with these morbid growths is certainly not considered as a warranted supposition, still it would not be right to omit to mention the fact that the health of both of these women became improved, about the time these tumours began to grow, with the greatest rapidity.

The constitutional treatment of the symptoms under consideration is avowedly unsatisfactory. There is never hyperœmia, nor is anæmia necessary to their existence. Usually the vitiation of the assimilating functions in long standing cases, induces some impoverishment of the blood in regard to its globular elements. Iron, therefore, is a remedy of very limited application in their treatment. It is indicated when there is anæmia, but so soon as this state is corrected, its further employment is pernicious and unfriendly, inducing, then, headache and local gastric irritation. The use of remedies of the class of blood restoratives, as defined by Mr. Headland, in his late work on the action of medicines, of which iron is the type, does not appear demanded to any great extent.

There is but little evidence that the blood is altered in regard to the proportion of its normal elements. We see but little wasting in such cases. Amid all their protracted and varied suffering, the nutrition of the tissues in such women, goes on well. Though almost bed-ridden for years, they often appear too well to be considered as invalids by the casual observer. The great disturbance is in the nervous system, [illegible] is its emotional character that constitutes all the embarrassment in the successful management of the hysteric diathesis. The incapacity of such invalids for muscular exertion, and that aggravation of their symptoms when it is incurred, prove a habitual defective supply of nerve force. On the other hand, the paroxysms, attended by spasm and convulsive movements, indicate occasional excess in this element. Over all these come the intense activity of the emotions and feelings, which disqualifies them from resisting impressions, whether pleasurable or the reverse. Whether this state may not arise, or be at least aggravated by toxæmia affecting the relations between the blood and the nerve tissues, so as to interfere with their genesis or metamorphosis, is a point our space will not permit us to discuss. If we have succeeded in this analysis of the facts above presented, in drawing attention to the probability that a toxic state of the blood may constitute an important element in those diseases of women, usually

denominated nervous, &c., we have answered the design of our paper. To other and more competent hands we will confine the task of drawing, if any exist, such practical deductions which a further consideration of the subject may suggest.

ART. II.—*History of a Case of Malformation, successfully treated by an Operation.* By GEO. HAYWARD, M. D., Surgeon to the Massachusetts General Hospital, etc.

Cases in which the rectum opens into the vagina are occasionally met with. They are spoken of by Geoffroy St. Hilaire, though he says they are more rare than those in which the intestine terminates in the bladder or in the urethra.

But I have not found any description of a malformation precisely similar to one that recently came under my observation; and in which the difficulty consequent on it, was, I have reason to believe, entirely removed by a slight operation.

About eighteen months since, I was desired to examine a female infant, three or four days old, in consequence of a malformation about the anus. On inspection no external opening of the bowel could be discovered; but in separating the labia, it was found that the urethra and vagina were perfect, and at two or three lines behind the vagina, there was a small orifice, sufficient to admit the large end of a probe, through which the fæces were discharged.

The child did not seem to suffer at all, and I heard nothing of it for more than a year, though I visited frequently the family to which it belonged. A few days after it was weaned, which was in January last, I was called to visit it, and was told, that since the change in its diet, it had apparently suffered very much in its efforts to discharge the contents of its bowels. These efforts were violent, almost constant when the child was awake, and afforded scarcely any relief. Since it had ceased nursing, it had become emaciated and very feeble, and had but little continuous or quiet sleep.

After it was weaned, its diet consisted of milk and barley flour, and the fæces, no doubt in consequence of the change in the food, had become of much greater consistence. The contents of the bowels were

forced out by violent straining in small pieces, quite solid, about the size of a duck shot.

On examining the parts, I found that the outlet of the bowel was but little, if any larger than when I saw it before, and the large end of a probe did not pass very readily into it. The moment however that it was introduced, strong convulsive efforts followed, and it was evident, that there was a great accumulation of fœcal matter in the intestine, lying in the hollow of the sacrum.

As it was apparent that the child would not live long in this way, I suggested the expediency of attempting to relieve it by an operation; though I confess that I was not very sanguine as to its success, nor did I give a very favourable prognosis to the parents as to the result. They consented however, and on the following day, Jan. 26th, I performed it in the following way.

The child, having been rendered insensible by the inhalation of rectified sulphuric ether, was laid on a table. A director of the smallest size was introduced, though with difficulty, about an inch into the bowel, with the groove towards the sacrum. With a very narrow knife passed into the groove, I enlarged the external opening of the bowel sufficiently to admit my fore finger, and continued the incision upwards nearly to the end of the director; I then found that I could pass my finger readily into the bowel, which appeared to be of the usual size, till within about an inch of its outlet, where it had been contracted into a small canal, certainly not one fourth as large as the bowel above.

I did not consider it necessary to carry the incision any farther; nor did I deem it safe; partly from the fear of hemorrhage, and in part from an apprehension, that if I did so I should destroy the retentive power of the bowel, as sometimes happens from an operation for fistula in ano, where it has been found necessary to divide the parts high up.

Lint was applied to the edges of the wound, and a cloth wet in cold water laid over it. There was no bleeding, except a slight one at the time; the child was evidently relieved, though the fœcal matter was not discharged till castor oil was administered on the following day.

In two days after the operation I introduced a moderate-sized rectum bougie, of a diameter as large as that of the bowel, and this has been done daily to the present time. In a very few days the wound healed, and the child has apparently suffered no inconvenience since. It has regular evacuations of a proper consistence without the

use of medicine. It has the entire control of the bowel and has regained its health. It is now as vigorous and active as female children of that age usually are.

I examined the parts very recently, four months after the operation. The anus can now be seen without separating the labia; but the perinœum is covered with the same delicate mucous membrane that lines the vagina. Whether this will ever be productive of inconvenience, it is not perhaps easy to say; it is probable that this membrane may lose some of its sensibility, but there is no reason to suppose, that it will acquire the properties of the ordinary covering of the body.

This case must be regarded as a favourable one of malformation of this kind. In some that have been described, the opening into the vagina was as large as the diameter of the bowel, and there was no sphinxter; while here the lower part of the rectum was contracted into a very narrow canal, furnished with muscular power sufficient to prevent the involuntary discharge of the fæces. Where there is no provision of this kind, the malformation must of course be one of the most disgusting character.

ART. III.—*A Case of Black Cataract.* By H. L. THOMAS, M. D., Richmond, Va.

The existence of black cataract is regarded as extremely doubtful by many opthalmologists, and by some it is totally denied. The *name*, though of frequent occurrence in German medical literature, is used to designate a disease, which pathologically has no connection with cataract; it is applied to amaurosis, black suffusion, the gutta serena of others. Such a discrepancy between the name of a disease and its true anatomical character is obviously perplexing; indeed the confusion of definitions and names employed by some foreign and ancient writers, is a sad source of error and doubt, since we are sometimes unable (on account of the irrelevant and diversified titles employed) to recognise a disease as the same under different authors.

Neither Dupuytren or Delpech, in the course of a long and eventful career, ever encountered a case of black cataract. Mr. Lawrence has never met with one of a darker colour than mahogany, and remarks,

that if by this disease authors mean cataracts literally black, he has never seen any such. This is perhaps the vaguest assertion ever made in connection with the discussion, for nothing can be more variable than the shades of mahogany. We have never seen a cataract literally white or grey, yet every one appreciates these terms when applied to opacity of the lens or capsule. A mere variation of shade does not alter the fixation of colour, and we imagine it does not require a very great stretch of the imagination to conceive a shade which, in contradistinction to white or grey, may be called black opacity.

There is no doubt that the pigmentous has been confounded with black cataract, but we cannot ascribe such an error of diagnosis to such men as Magne and Cruveilhier, and many others of equal experience who have reported similar cases. It is true that in the case of Magne and Cruveilhier, the lens was depressed and not extracted, and consequently this observation is not supported by anatomical demonstration. It is this fact that has probably led Dr. Hays to consider the case as inconclusive. There are other observations however which appear to us positive on this point. * Wenzel states that he has extracted the lens and found it perfectly black upon several occasions.

† M. Roux has extracted a black cataract from the eye of a little girl. ‡ Alessi has reported an instance of a reddish-black lens, which he removed from the eye of a woman 76 years old. § M. Velpeau has seen black cataract more than once, among the women upon whom he operated at La Pitie. In 1845, || M. Maisonneuve exhibited to the Society of Surgery, a lens which presented a perfectly black central nucleus. In addition to these, we desire to present the following case, without claiming more weight for it than has been accorded to similar observations.

In the winter of 1852, a man aged fifty-five or sixty years, presented himself at the clinique of M. Desmarres, with loss of vision in the right eye. He was of hale, hearty appearance, and rather plethoric in conformation. He could give no history of his disease and ascribed it to no particular cause.

M. Desmarres, having satisfied himself of the nature of the affec-

* See VIDAL (de Cassis,) *Medecine Operatoire*, Tome III, p. 169.

† VIDAL (de Cassis.)

‡ See page 67, *ante*.

§ VIDAL (de Cassis.)

|| VIDAL (de Cassis.)

tion, desired the physicians and students present, to examine the case carefully and give him their opinions. When this had been done, there was a unanimous verdict of—Amaurosis.

M. Desmarres observed that he was not surprised that the disease had not been detected, although attention to the mobility of the pupil would have saved them from positive error. "It is a disease, he continued, which you may not see again in a life time; it is black cataract; and though the signs of the disease are positive to me, there is but one way of proving it to you before an operation. By dilating the pupil, you will all observe, what I have already detected, a small * point of the lens which has not assumed the general black colour." In fact, when the belladonna was applied, a white speck on the inner circumference of the lens was exposed.

M. Desmarres then proceeded to extract the lens by the superior incision; but the results of the operation were as distressing as they were unexpected. Scarcely had the superior circumference of the lens, under the effect of the usual pressure, started from its chamber, than the vitreous humour began to flow freely and copiously out. A little deliberation sasisfied the operator that the lens could not be restored, as the pressure from behind gave every reason to suppose that the eye would be subjected to subsequent disorganization, resulting in total loss of the globe, and the conclusion was to finish the operation with reference to this ultimate result. The lens was accordingly extracted, and the whole of the vitreous humour escaped. Strange to say, however, the eye-ball did not collapse, but remained as firm to the touch, and as salliant as before the extraction of the lens or the loss of the vitreous humour. A probe was then introduced into the cavity of the globe to ascertain the cause of the eye's retaining its rotundity, when, by a little manipulation, M. Desmarres succeeded in breaking up and discharging a coagulum of blood of sufficient size and consistency to account for the pressure upon and consequent discharge of the vitreous humour. The eye-ball immediately collapsed, and the patient got well without any untoward symptom.

As far as the touch was concerned, the extracted lens seemed to have undergone no alteration of structure, but only to have suffered in its characteristics of colour, presenting to the eye quite the appearance in colour of the clot of blood which had been discharged.

* The same thing was observed in the case of the Duke of Cumberland, operated upon by Graeffe.

It is not our purpose to discuss the phenomena of black cataract, but there are some remarks which may be appended to these observations as not altogether irrelevant.

Various explanations have been offered for this variation in the colour of the lens, among which may be noticed that of Rosen-Muller, who ascribed it to melanose, and that of Langenbeck, who ascribed it to manganese. Discarding the hypothesis of Muller as objectionable, inasmuch as, for its support, it involves the admission of an alteration of structure on the part of the lens, which is not the case in black cataract, we come to the idea of Langenbeck, which we should regard as equally hypothetical, but for the fact of the presence of the clot of blood behind the vitreous humour, in the case we have just detailed. Without knowing upon what grounds he founded his idea that the colour of black cataract was due to manganese, in this case it is partly deducible from the fact of the presence of effused blood adjacent to the lens. We all know the disposition of certain tissues to undergo an alteration of colour, dependent upon various circumstances, as diathesis, presence of foreign matter near to them and within reach of absorption, etc. That the sclerotica possesses this disposition is proved by the dark colour it assumes from the long continued application of nitrate of silver to the eye; that the corium of the skin possesses it, is illustrated by the permanence of different colouring matters when applied, as in tattooing. The structure of the lens is sufficiently like that of the last two named tissues, and with so much colouring matter (iron, manganese and hematin) as might be contained in a clot of blood lying within reach of its action, the admission that this might be the source of the discoloration is not entirely objectionable. In the case of ordinary cataract, the loss of transparency is unquestionably due to the presence of calcareous and other compounds which have been deposited within the tissue of the lens, and the opacity and consistency are always relative to the amount of this matter. That the opacity of the lens is due to the presence of foreign matter rather than an organic alteration is proven by the fact that incipient cataract is frequently amenable to the action of absorbents or solvents. If the crystalline medium then can absorb and integrate foreign matter from the general circulation, it is reasonable to suppose that it would exert the same influence upon matter effused in its proximity, and which by the laws of the economy would be directly disposed of by absorption. The reten-

tion of the colouring matter within the tissue of the lens must be explained by the same laws which make such colorations in the sclerotica and corium (tissues of the same class) permanent.

With regard to the length of time the blood had been effused into the eye, the incompleteness of the history of the case leaves us to conjecture. That it was antecedent to the operation cannot be doubted, as there was nothing in the manipulation to determine such an event. Under the circumstances then, in venturing a conclusion, we would say that the *black cataract* was the consequence of a previous condition, and this condition was *apoplexy of the eye.*

ART. IV.—*Of the Processes of Digestion;* being Notes of a Lecture by Professor SAMUEL JACKSON. Reported by P. H. CABELL, M. D., of Richmond, Va.

The alimentary substances destined to be used in the economy which are taken into the stomach, do not all undergo digestion there; some of them are merely disintegrated, some are received into the circulation, and some pass from the principal digestive cavity unchanged. The gastric juice is only potent in the dissolution of the albuminous or protein compounds, which are easily reduced to the liquid and absorbable state, but has no solvent power over the hydro-carbons, as starch, oil, etc. Sugar, gum and pectin, are most probably absorbed whenever they come in contact with the mucous membrane, for they are already prepared for the uses of the economy, and need no solvent save water, which is present everywhere. The hydro-carbons, which are insoluble, and which require decomposition or very minute mechanical division, are not acted on by the gastric juice, and might remain forever in the stomach unchanged except by putrefactive decomposition. A familiar illustration of the inability of the stomach to digest oils and fatty food, is seen in the case of cod liver oil; if given while the patient is fasting, or during a meal, unpleasant, oily and acid eructations are almost sure to occur; but if administered about an hour after eating, and when the digested food is passing out of the stomach into the duodenum, no such unpleasant effects are produced. But while fat is not itself digested in the stomach, a small quantity is

still needed by the protein compounds for their speedy digestion; the fat seeming to exert a kind of catylitic action, a few globules being sufficient to start the process, as the most minute quantity of yeast, or an animal ferment will induce an important change in a large mass without undergoing change itself. This fat is not however absolutely necessary for the digestion of the albuminous food, merely hastening the process most wonderfully. This experiment succeeds out of the body perfectly, and has been frequently performed.

The true digestive cavity for oils is the duodenum, and their digestive fluid is the pancreatic juice; not that the oil is really digested, for it is already prepared for the uses of the economy; the only difficulty is a mechanical one, the globules being far too large to be taken up by the lacteals and other absorbent vessels; this difficulty the secretion from the pancreas removes by forming a most perfect and permanent emulsion with oleaginous matters. This would be difficult of proof in man, as the ducts of this gland and of the liver open so near together, and mingle their respective fluids at the same instant, with the chymous mass passing by their orifices; but in some of the inferior animals, the rabbit especially, the effect of the two secretions can be easily observed, as the orifices of the excretory ducts of the two glands are at least twelve inches apart. When a dose of oil is administered to one of these animals, it passes unchanged through the stomach, through the upper portion of the duodenum, by the opening of the hepatic duct, and becomes instantly changed into a milky emulsion on receiving the secretion of the pancreas. The secretion from this gland is most decidedly alkaline, and is composed in great part of the albuminate of soda, which has many important uses in the economy, acting both as an acid and as a base. The juice will form a most perfect emulsion with oil out of the body; the albumen of the egg will do the same, and so will the albumen of the blood. Each oil globule receives a delicate albuminous investing membrane, which renders it absorbable by the lacteals. Now as fat (being rich in hydrogen and carbon) is absolutely necessary for respiration and calorification, the importance of its entering into our food must be evident; and, indeed, when respiration is at its maximum, as well as the generation of animal heat, oily food is most eagerly sought for, and quantities are taken at these times, with not only impunity, but with decided benefit, which in the summer or in southern latitudes would seriously impair the health. This is thought to be the reason of the great mortality of the English

living in the tropics, they find it as hard to change their habits as the leopard its spots, and pursue the same course of diet in these warm climates, where the temperature is equal to that of the body, and where consequently the generation of heat is almost suspended, and the respiration much less active. The inevitable result is, that the alcoholic and oleaginous food which in a cold and damp climate are not only harmless but necessary, are thrown out of the economy by the liver, which frequently acts as a compensating organ to the lungs; the liver being overtasked, becomes congested, inflamed, and frequently completely disorganized. In warm climates the amylacious and saccharine substances are sufficient for calorification and respiration; and even in northern latitudes persons with strong digestive powers are capable, by mysterious animal chemistry, of converting these substances into fat; but at the expense of a great deal of nerve force; even the herbivera, who live entirely upon vegetable substances, find a great deal of their fat ready made for them and stored away in the seeds of grasses and grains. But while oleaginous substances are so important in the economy, they must not be abused; for some persons, especially those of a bilious temperament, are incapable of accumulating depots of this substance in the system, and if more is given than necessary for respiration and calorification, and more especially if the eliminating functions of the lungs have been impaired by depositions or other causes, the excess must be gotten rid of by the liver. This vicarious office it frequently performs, but if taxed too much the same disastrous results occur, as to those living in the tropics. The reason that fatty degeneration does not always occur in phthisis seems to be owing to the fact that the destruction of the lung proceeds synchronously with deficient digestion and absorption.

A curious and interesting fact, and one which as it were gives us a glimpse into the mysterious laboratory of nature, is the mode in which cells and membranes may be formed out of the body, and by artificial means, but of course wanting the vital principle; and therefore amenable to chemical and not vital laws; if a thin film of oil is placed on a piece of glass, and then covered with albumen, a membrane results; if this membrane is broken by rubbing, it breaks into myriads of globular bodies infinitely small, consisting of a cell wall of albumen, and a contained fluid, representing a cell and its contents. The albumen of the blood is found existing in three states, composing the walls of the red corpuscles, the substances of the white, and the greater

portion of the solid ingredients of the serum. Now this albumen of the cells and corpuscles is found to be identical in composition and in chemical reactions with the muscular tissues, the fibrin of the blood which has generally been regarded as the building material, and pabulum of the body, acting very differently, and being very unlike muscular tissue. The importance of albumen as the plastic material from which the tissues are to be built up, cannot be too strongly enforced, the fibrin appearing to play a part in the economy much less exalted than that usually assigned. But while it seems necessary from recent experiments to degrade fibrin, still it has many important uses in the economy, probably supplying the ligaments and tendons; also by its contractility and coagulation guarding us from fatal hemorrhage on the division of a vessel; also forming on cut surfaces a skeleton or framework for the temporary support and closure of the wound, allowing the albumen which seems to be the true plastic material to organize between its meshes, and slowly undergo the change into tissue. When as in inflammations fibrin alone is effused on the surfaces of membranes and the valves of the heart, no nuclei nor perfect cells are seen to form, and the adventitious membrane never reaches a higher degree or organism than the fibrous tissues; when liquor sanguinis is effused perfect transformation takes place, and the new tissue gradually assimilates itself to the chemical and physiological structure upon which it has engrafted itself. The proofs of the relative uses of albumen and fibrin in the animal economy are many; the most conclusive are the excessive quantity of fibrin in the arteries going to the kidneys, which are the great eliminators of nitrogenous substances, and the small quantity of albumen in the blood of the veins returning from the kidneys, after having been deprived of its excrementitious substances, the reverse is found; the albumen is in excess over the fibrin, which is found in much smaller quantities than before the blood passed through the kidneys. The arteries supplying the muscles contain blood rich in albumen, the veins return from muscles blood rich in fibrin, and containing less albumen than passed to the muscles, the deficiency being probably retained to supply the loss of the fibrin, which having served its allotted time is now removed from the economy, or passes into some less highly organized tissue; and lastly its excess in all wasting diseases where nutrition is suspended and disintegration going on.

Besides the protein and hydro-carbonaceous substances, there exist several others: not in large quantities, but ever present in a state of

health, and essential to the perfect organization of the tissues. These substances are the salts; they are found in the fluids of the body and entering into the composition of cells and solids in about the same proportions as in the water of wells and springs. The most important of these salts seem to be the phosphates of potassa, soda and lime; sometimes, however, the system cannot obtain a sufficiency from these sources, and then they must be supplied with the food. During the existence of pregnancy these salts disappear entirely from the urine and are diminished in the blood; but reappear soon after delivery, though not in normal quantities during free lactation; the wants of the fœtus, who cannot be supplied from without, cause this impoverishment of the mother. The food of children in large cities has on analysis been found deficient in these ingredients, which may account in part for their general cachectic condition, and the great mortality among them when raised by hand, or even when drinking the diseased and impoverished milk of their mothers.

The phosphate of lime is by many considered inert, because insoluble in water; but there are many other solvents besides water in the economy, and this substance has been found to yield readily to albumen. When it is wished to give the phosphates in pregnancy, cachexy, and to children fed by hand, Dr. Jackson recommends the following: ℞. Phosphatis sodæ, grs. v.; phos. ferri., grs. iij.; phos. calcis, grs. x.; this is the dose for an adult; the greater part of this combination will most probably remain undissolved; but the excess can do no harm; they are digested and received into the economy in very minute quantities, but are not therefore to be lightly regarded, the simplest element or the atom apparently the most useless, are just as necessary to the integrity of the organism as the key stone of the arch.

"From nature's chain whatever link you strike,
Tenth, or ten thousandth, breaks the chain alike."

ART. V.—*On the Best Mode of applying the Ligature to Arteries in cases of Aneurism.* By JEAN SALEMI, Chief Surgeon to the Grand Hospital of Palermo.

I have no intention of describing here the different processes for ligature of the arteries, practiced by the aid of metallic, animal, or vegetable substances, such as have been treated of by Hunter, Scarpa, Jones, Lawrence, Maunoir, Vacca-Berlinghieri, Jameson, Physick, Levret, etc. Neither shall I review the different modes of compression employed for the cure of aneurism by Deschamps, Percy, Crampton, Duret, Ristelhueber, Asselini and Cumano. Every surgeon properly instructed in his art, knows each of these methods, and knows how to appreciate their just value, their advantages, and their inconveniences. I shall limit myself to examining the methods actually adopted, which, in practice, have the greatest number of partisans, and to indicate the reasons which ought to make us prefer the one that experience has proved the most useful. I shall treat first of the temporary ligature; next of the permanent ligature; and, lastly, discuss the question, whether or not, in practising the latter, the internal membranes of the arteries should be ruptured or not.

In order to fulfil this task with impartiality, it will be necessary to divest myself of all preconceived ideas, to interrogate facts, to meditate upon my personal observations, and those of others, to discard entirely the reasonings on this subject, based upon experiments practiced upon animals, experiments not altogether applicable to man, and which might lead us into error, as they have already misled men of superior merit, who, nevertheless, were well aware that experience and not reasoning is the best guide on this subject. Struck with this truth, I did not wish, in a work upon this subject published by me in 1824, to pass a judgment of preference for one method over another, although at this very time I had collected numerous facts which inclined me strongly in favour of a rupture of the internal membranes of the arteries in order to effect their obliteration. I will limit myself to asserting, that the unfortunate results attending all the operative procedures, the difficulty of comparing them, the advantages and inconveniences attached to each method, the success due to each, the impossibility of comparing the results obtained, for want of acquaintance

with the individuals and of the condition of the arterial trunk operated upon, constituted so many obstacles which prevented the possibility of deciding, without the risk of error, upon a preference for any one method over another. Such a decision could only be the result of time and patience on the part of enlightened and impartial observers; and it is only from the privilege of long years of experience, that I venture to present my opinion upon the best method for applying the ligature to large arteries.

I. *Of the Temporary Ligature.*—Jones of Edinburgh having satisfied himself, by experiments upon animals, that in tying an artery and forcibly breaking the middle and internal coats at several points slightly distant from each other, the obliteration of the vessel might be obtained in a few hours, proposed this method as the surest of all for the cure of aneurism, asserting that by its employment the operator avoided the division of the artery in its continuity, and consequently secondary hemorrhage—that the wound united by first intention, no foreign body being enclosed, the ligatures having been withdrawn at the end of a few minutes.

These advantages appeared so seducing, that the method of Jones was not only received with favour in England, but it pleased Scarpa so much, that he resolved to metamorphose his own permanent ligature into a temporary one, without however producing rupture of the internal membranes, or modifying in any way his method of flattening by the interposition of a waxed linen cylinder. The illustrious professor of the University of Pavia had thought proper to adopt the idea of Travers, that is to say, in place of withdrawing the ligature immediately after strangulating the artery, he preferred taking it off after a considerable lapse of time, in order that the blood and lymph thrown out might acquire sufficient solidity to resist the force of the circulating blood. But the experiments of the Edinburgh surgeon, repeated upon animals by Hodgson, and Dalrymple of Norwich, with little success, then applied to man by Hutchinson, Travers, Cooper, and Johnson, have so rarely succeeded, that the temporary ligature, during our day, has fallen into complete disrepute.

As to the second method, called Scarpa's temporary ligature, it has been so victoriously combatted, by the aid of conclusive facts, by Vacca-Berlinghieri, that there is no use of opposing it by any reasoning; because, besides its being attended with all the inherent inconveniences of the method of Jones, that is to say, inability to establish with

certainty the space of time necessary for the obliteration of the vessel, especially when this is in a diseased condition, (which is very often the case in aneurism,) this method is objectionable on account of the great difficulties, and even dangers, when it is necessary to withdraw the ligature and little cylinder, notwithstanding the employment of new instruments for this purpose, designed by Scarpa himself.

Even when the ligature is removed, the ulceration continues, as Vacca has demonstrated, and as is attested by a number of facts, collected mainly by Cooper, who tied the crural artery for a popliteal aneurism. After breaking the middle and internal tunics, he retained the ligature upon this artery during thirty-two hours, and at the end of this time removed it: the blood escaped at the delegated spot; the ligature was reapplied and left during forty-eight hours; this time the blood did not reappear, but on the twelfth day secondary hemorrhage took place.

In 1824, my father, Dr. Louis Salemi, applied the *presse artère* of the Chevalier Assalini upon Antoine Bonfiglio, suffering with popliteal aneurism, approximating the walls of the artery without rupturing the continuity of their tunics. The operation was practiced the first day of April in presence of many professors and of Assalini himself. At the end of twenty-four hours, presuming the adhesion to be effected, some of the assistants proposed to remove the instrument; but at the end of a few minutes it was necessary to reapply it, for the pulsations began to reappear in the tumour. The fourth day, the adhesion was perfect, but upon prudential considerations it was decided to prolong the application of the *presse artère.* Having removed it definitively the fifth day, the adhesion was found perfectly established, and everything presaged permanent amelioration. Vain hope! the eighth day, hemorrhage supervened.

I myself practiced in 1833, in the grand hospital of Palermo, the ligature of the femoral artery towards its superior third, upon a man, aged fifty-five, carrying an immense aneurismal tumour in the inferior third of the thigh. I had recourse, in this case, to the permanent ligature, rupturing the middle and internal coats of the artery. At the end of eight days the tumour and the inferior extremity of the corresponding limb were gangrenous, and on the thirteenth day the patient died. At the autopsy, I found the internal membranes of the ligatured artery completely divided, the points corresponding to the ligatures a little

red, but I discovered no signs of a clot or an effusion of lymph, the artery preserving its natural transparency.

In a case in which Travers placed a temporary ligature upon the superior third of the femoral artery, the result was so unfortunate that this distinguished surgeon was obliged afterwards to apply another ligature by the ordinary method, and from this moment he renounced forever the first of these methods which the experiments of Béclard could never cause to be adopted in France.

The defects which I have enumerated, will serve to show that the advantages of the temporary ligature in the treatment of aneurism are at least equivocal, and prove that the method of Jones, far from being a reform in surgery, is, on the contrary, if not useless at least objectionable, and is so treated, except by a few of the English surgeons.

II. *On the Permanent Ligature, with division of the middle and internal membranes of the artery.*—The experiments of Jones tried upon animals, could not make his method popular, because they were disproved by facts observed in man. Nevertheless, the affirmations of the Edinburgh surgeon induced a great many practitioners to adopt a new method, consisting in breaking the middle and internal tunics by means of a narrow permanent ligature. According to the idea of these practitioners, it is indispensable to rupture the internal coats in order to obtain an obliteration of the arterial trunk, its execution preventing entirely the redoubtable secondary hemorrhage, attending other procedures. I will examine this double question: 1. Is the obliteration of the artery always secured by a rupture of the internal membranes, by the formation of a clot above the ligature, or by adhesions of the internal membranes brought about by exciting a proper degree of inflammation? 2. Can facts be adduced to prove that the advantages claimed for this division of the membranes are real, and that its effect is the prevention of secondary hemorrhage?

1. *Resources employed by nature for arresting hemorrhage.*—When an artery of a certain calibre is completely and transversely divided, and nature has sufficient power to arrest the flow of blood, observe what takes place: The middle tunic of the divided artery, by virtue of its proper elasticity, retracts a little into the cellular sheath which envelopes it, and draws with it the internal membrane which adheres to it. The cellular membrane being no longer sustained by the other two tunics, notwithstanding its union with the surrounding tissues,

prolongs itself beyond the cut point of the artery in the form of a little cone, the internal surface of which is rough and unequal; its base corresponding to the retracted extremity of the middle tunic, whilst its summit makes a part of the surface of the wound produced by the instrument which has divided the artery. Thus the blood filters itself into its cellules, is deposited, coagulates, and the formation of a clot puts an end to the hemorrhage.

2. *Phenomena which are manifested when the artery is completely cut or punctured.*—If an arterial trunk be simply wounded, the membranes proper, endowed with greater resistance, will generally be more extensively divided than the cellular sheath, whose texture is soft and extensible. Then the blood which escapes from the artery not being able to enlarge the opening in the sheath, raises it up by degrees, distends it, coagulates there, and forms a more or less extensive ecchymosis occupying a space of many inches above and below the wound. The parallelism between the opening of the sheath and that of the proper membranes of the artery is destroyed, a circumstance which opposes itself to the discharge of the blood without, and to its infiltration into the surrounding tissues, and it is in this way that the clot is formed. The clot produced under these circumstances is composed of two parts; the one external, large, placed opposite the uplifted sheath of the arterial trunk, constitutes what J. L. Petit called the *couvercle*, because it covered the opening through which the blood escaped; while the other, remaining between the lips of the opening, contracts adhesions more or less intimate with it, and forms the *bouchon*,* according to the expression of this great practitioner, whose genius gave such a brilliant epoch to the Royal Academy of Surgery of Paris. It is the latter clot which arrests the hemorrhages effectually. The clot which suspends the hemorrhage temporarily ultimately undergoes transformations even to organization; the walls of the vessel contract mutual adhesions, and finally, as Dupuytren has proved, this portion of the artery is converted into a ligamentous cord.

3. *Effects of mediate compression in arterial hemorrhage.*—Compression, mediate or direct, known in antiquity, since it is mentioned by Celsus, is still recommended by some modern surgeons (Plenck, Pelletan, Samuel Cooper, etc.); it is an hemostatic agent which is not

* J. L. Petit recognized besides the clot a white portion, formed of the substance which is effused between the lips of a wound. This white portion of J. L. Petit is nothing but the coagulable lymph of our day.

always efficient, especially when there exists no point upon which it can be practiced effectually. When compression succeeds in suppressing hemorrhage, it acts by forming a clot. That which proves it incontestably, is that when, on account of particular circumstances, the clot is not formed, the blood never ceases to run.*

4. *Examination of an artery submitted to the ligature for twenty-four hours, with or without rupture of its middle and internal membranes.*—If a longitudinal incision be made upon an artery which has been submitted to a ligature for twenty-four hours, without rupture of its tunics, generally, the redness of the internal membrane can be observed, with its inflammation and thickening, not only at the point comprised under the ligature, but considerably above and below its limits. Moreover two small clots of a conical form may be seen, one above and one below the ligature, resting against it by their base, and slightly attached to the internal membrane. If the ligature has been applied so that the middle and internal membranes are ruptured, then besides the inflammation of the internal membrane and the formation of the little clots slightly adherent at different points, the circular rupture of the internal membranes may be seen, and around this a slight extravasation of blood. During a certain length of time the circulation is interrupted, as well in the case where the membranes are divided as in the other case; then there is no longer a doubt that the clots form an obstacle to the passage of the blood.

5. *Examination of the superior extremity of an artery which has been submitted to the permanent ligature, with or without rupture of the internal membranes.*—In the one or the other of these circumstances, at the superior extremity of the artery, the middle and internal membranes are found slightly folded in the vessel, and the cellular tunic which covers them forming at the centre a small black cicatrix. If the artery be opened longitudinally a clot is seen, the base of which is fixed at the free extremity of the vessel, and varies in length from three to five centimetres. The clot is more or less adherent, and presents an organization more or less advanced, according to the time which has passed, the qualities of the blood, the temperament of the

* Latterly, many surgeons have recommended compression at the instance of Dr. Kock, sr., of Munich, who applied it upon the lateral parts of limbs after amputation, in which cases he sometimes succeeded in obliterating the artery. But the younger Dr. Kock having operated at Berlin according to the method of his father, in presence of Professor Graeffe, was obliged to have recourse to the ligature, which shows to what extent compression is to be relied upon."

patient, the age, etc. It must then be admitted that the clot constitutes the most powerful cause of the obliteration of the vessel. Every surgeon admits that the arteries are susceptible of an inflammation which determines a complete adhesion of their walls, provided that these are maintained in immediate contact for some time.* Learned and distinguished observers, guided by exact experiments repeated upon man and animals, have transmitted us this fundamental law, that by the simple approximation of the arterial walls, and under the influence of a compression equal to that which, during a sufficient length of time, might be exercised by the thumb and fore finger, a sufficient degree of adhesive inflammation is excited within and without the compressed artery to determine the formation of an organizable lymph, ample enough to secure the adhesion without rupture of the membranes. We are possessed of such a number of observations proving this assertion that it would be a work of supererogation to enumerate them. Those who wish to meditate upon them can consult the works of Seiler, Scarpa, Crampton, Graeffe, Roberts, Mayo, Wattman, Fretz, Eccelli, Paletta, Morigi, Menegazzi, Solera, Balestra, Cumano, Assalini, Odone, Bellanger, Traners, Vacca-Berlinghieri, etc., etc., which furnish conclusive proofs that arteries can be obliterated without a rupture of their middle and internal coats.

The details into which I have just entered ought, it seems to me, to be satisfactory to the point. I will therefore discard all discussion tending to show that the clot is the principal cause of the obliteration of an artery, and that to obtain its formation the division of the middle and internal membranes is not necessary, as the partisans of this method pretend. In effect the means employed by nature and by art to arrest hemorrhage, an inspection of the ligatured artery, and the innumerable facts furnished by pathology, leave no doubt upon the point. Nevertheless, let us examine if, in applying the ligature to an artery and rupturing its internal coats, secondary hemorrhage is really prevented; and let us enquire how it is effected. If the arterial trunk upon which the ligature is placed be in a healthy or unhealthy condi-

* Breschet.—*De l'inflammation des veines, etc.—Journal complémentaire du Dictionnaire des Sciences Médicales:* "A simple compression, similar to that which is obtained by pressing the artery between the thumb and fore finger, suffices to determine the just degree of adhesive inflammation, and of the secretion of coagulable organizable lymph in and around the artery, necessary to form the vascular union, without rupture of the membranes." (*Dictionaire des Sciences Médicales*, vol. 28, p. 205.)

tion, the hemorrhage always comes from ulceration of the arterial walls, especially the external or cellular, or from the non-consolidation of the clot; and the more prompt this ulceration is, the less time is left for the clot to organize, and, consequently, secondary hemorrhage happens with more facility. Then, if an artery is tied with a very fine thread, and sufficiently tight to rupture its membranes, it must be admitted that ulceration is more apt to supervene than if the arterial coats were preserved in their integrity; making secondary hemorrhage more frequent as a consequence. What I am advancing is no hypothesis, but reason based upon facts of the highest importance, and which I shall proceed to relate.

Dr. Horace Jameson, chief surgeon of the Baltimore (United States) hospital, has refuted by incontestable facts, in the way of new experiments, the principal observations of Jones. It is not true, says he, that there is any advantage in rupturing the membranes; on the contrary it ought to be strenuously avoided. Very fine threads and round ligatures are dangerous because they strangulate the *vasa vasorum* of the cellular coat. Sir Philip Crampton, in Ireland, appreciating this truth, by reason of multiplied observations on his part, vigorously combats the doctrine of Jones. In different cases of ligature, in which the internal tunics of the artery were divided, Sir Astley Cooper saw hemorrhage supervene on the eighth and twelfth day. The same accident happened to Benjamin Travers when he operated in this way. M. Velpeau has several times had a secondary hemorrhage to occur from rupturing the internal membranes. In 1830 I witnessed a case operated on by him at La Pitie, in which he tied the crural artery for popliteal aneurism, breaking the internal membranes, and the patient died from secondary hemorrhage on the eighth day. There is still another important case in which I figured as a witness. Lisfranc, although no advocate for the method of rupturing the membranes, was so seduced by the advantages attributed to it, that he practiced it upon a young girl, suffering from a reputed aneurismal tumour at the superior part of the right carotid artery; but the eighth day after the operation, sudden hemorrhage came on and the girl died. At the autopsy, the artery was found to be ulcerated at the part occupied by the ligature, and the clot still unorganised; a double circumstance giving value to my opinion. Far from being aneurismal, the tumour presented the characters of carcinoma, being filled with cerebral matter. This mistake ought to warn us of the difficulty, and the attention necessary

to diagnosticate a tumour situated upon the course of a large artery. Dr. Hodgson has frequently seen secondary hemorrhage on the seventh, eighth, and ninth days, after an operation with section of the membranes. And how often has the same thing happened to the illustrious Dupuytren at the Hotel Dieu, when rupture of the internal membranes had been practiced in ligature of the large arteries. In fact, there is no surgeon who has not seen this accident happen to his patients, when operated upon in this manner. It then is not true that rupture of the middle and internal coats will prevent surely secondary hemorrhage, as Jones and Picot and his partisans affirmed. On the contrary, any other method renders it less frequent, and I think the experiments practiced by these authors, upon dogs, cannot be invoked to support their opinion, nor compared to the results derived from the operations made upon man, which make for us the most positive experiments, and the most direct and useful argument.

6. *Of the Permanent Ligature without division of the internal membranes of the arteries.*—The considerations which I have just adduced, prove evidently that the section of the internal membranes, so far from being necessary for the obliteration of arteries, is the most direct cause of secondary hemorrhage. It seems to me then, in order to avoid so grave a consequence, that it is best to leave the internal coats in their integrity, and, as advised by Vacca-Berlinghieri, to retard as long as possible the falling off of the ligature. By observing this, the perfect closure of the artery is obtained, its membranes remain entire, and their rupture, which ought to be effected gradually, is much retarded, giving the clot longer time to form and organise, thus rendering secondary hemorrhage less probable. Every operator, in fact, who, in tying an artery has avoided a primitive rupture of its internal membranes, has reaped happier results than by the practice of any other method. Saviard, Scarpa, and Boyer, who always avoided a rupture of the middle and internal coats, rarely saw secondary hemorrhage succeed their operations. At La Charité, Professor Roux always tied arteries by this method, and up to 1831, counted thirty operations without secondary hemorrhage—brilliant success which has rendered this illustrious surgeon faithful to this mode of practice, and decided him never to resort to the plan of Jones. By following this precaution, M. Moreland, of Marseilles, has always practiced ligature of the arteries with the most brilliant success, never having had a case of secondary hemorrhage. He performed a very remarkable operation upon

the external iliac for inguinal aneurism, in which the ligature came away on the twenty-eighth day. Paletta, Molina, and Felini, following the same plan, have had the same success. My colleague, Professor Monzella, in more than a dozen cases operated upon by this method, has only had one of secondary hemorrhage.

From these observations, it is fair to conclude that the surgeons, though few in number, who have followed the plan of preserving the internal tunics intact, have had better success than those who have operated otherwise, and have fewer of those fatal secondary hemorrhages to record.

For my part, I am satisfied that if secondary hemorrhage is prevented by the flattening of the artery due to the little roller of liner or diachylon, first proposed by Saviard, then by Scarpa, this result ought not to be attributed to the approximation of the internal walls of the vessel, but rather to the fact that their integrity is preserved by this method.

From what has been said, we may draw the following precepts.

1. The formation of the clot is the principal cause of the obliteration of an artery.

2. This formation of the clot ought to be seconded by the non-division of the internal membranes, in order to prevent more effectually the secondary hemorrhage.

3. The application of the small roller, destined to flatten the artery ought to be rejected as useless. It seems to me that the best method for tying an artery is with the simple permanent ligature, without a primitive rupture of the middle and internal tunics. To attain this end, it will be sufficient to employ a narrow plat composed of three waxed hemp threads, being not more than a line in breadth, abandoning entirely the buckskin strips, silk threads, cat-gut, metallic wires, &c., which only lessen the chances of success.

4. Lastly, it will be necessary to draw the ligature sufficiently tight around the artery to arrest the course of the blood, without lesion of the internal membranes.

I prefer this method above all others recently mentioned because it prevents secondary hemorrhage more effectually. But I do not pretend that it is infallible, because until we are able to decide exactly the abnormal condition of the artery before the operation, the patient will under any method be exposed to secondary hemorrhage.

These reflections are not offered as new, but because they are the result of long observation, which I wish to add as facts to the progress of surgery. They are offered to those practitioners who apply the ligature upon man and not animals, and it is to them that I trust the solution of the question, whether this method or that of others is best established by experience.*

* Translated from the French version of Dr. Cabaret, (*Revue de Thérapeutique*, Avril 15.) By H. L. Thomas, M. D.

CHRONICLE OF MEDICAL SCIENCE.*

The translations and abstracts under this head, are made expressly for this Journal.

ANATOMY AND PHYSIOLOGY.

1. *The influence of the Will upon the Circulation of the Blood and the Functions of the Heart.* By E. F. Weber.†

Many years since I discovered and demonstrated to learned friends that I could for a moment interrupt at will the movements of my heart and my arterial pulsations, by preventing the air from entering my chest, and at the same time compressing the latter. I have obtained the following results by resuming these experiments, in which I have been assisted by my brother Ernest Henry, and by Professors Günther, Lehmann and Hankel.

The cessation of the heart's action is followed by a suspension of the auricular and ventricular sounds, and of the murmurs of the aorta and pulmonary artery; on the contrary three to five arterial pulsations may still be perceived, the pulse does not disappear insensibly, but stops after a well-marked pulsation.

By means of the stethoscope an uniform friction sound is heard instead of the ordinary sounds of the heart, and this sound continues as

* Note.—Editorial comments are enclosed in brackets, [ ]. When a simple abstract or condensation is furnished, the name of the source from which it is derived appears in parenthesis.

† This memoir, by one of the most distinguished physiologists of Germany, is taken from the Transactions of the Royal Society of Sciences of Leipzig.

long as the chest is compressed, and does not depend either upon the heart or the great vessels, for it is heard over the whole pulmonary surface as well as in the præcordial region. Therefore when the thorax is compressed, the heart still exercises its functions; but its action is so feeble that it is announced no longer by the cardiac beat or by the præcordial murmurs, but only by the pulse. It follows that the pulse furnishes a better indication of the activity of the heart than the impulse or murmurs of the organ itself.

These experiments have left no doubt on our minds; their results are so certain that I can reproduce them at any time, and every one can do the same by following my directions. The fact, as I here represent it, is unknown; it is not mentioned in any of the great treatises on physiology, or in any special work on the circulation. A few modern physiologists have announced, it is true, the erroneous proposition, that arterial pulsations may be suppressed by arresting the respiration; but this assertion is contradicted by others, and justly so, for to produce the effects which we have obtained, the compression of the chest is necessary as well as the cessation of respiration. If this condition is neglected in the experiment, the pulse can be felt for a long time.

Several ancient and very remarkable histories, regarded as unfounded by the majority of modern physiologists, and related simply as curious fictions, deserve to be mentioned here, inasmuch as the facts which I present will perhaps confirm them.

Galen (*On the movements of muscles*, Book ii., ch. 6,) says:

"The respiration is entirely subjected to the will, and depends upon the mind: this is proved by the example of a foreign slave who determined to destroy himself one day when he was in violent anger; he laid on the ground, held his breath, and died in a few moments, after remaining motionless for a time, and then becoming agitated. Valerius Maximus cites a similar instance, (*Memorabil.* ix., 12.) 'There are also remarkable cases of death among foreigners; such is that of Coma, brother of Cleon, a chieftain of banditti. When he was taken at Enna, and brought before the consul Rupilius to be interrogated, he collected his strength, covered up his head, and held his breath, supporting himself upon his knees, (*innixus genibus.*) He died tranquilly in the hands of those who had captured him, and in the presence of the consul. We see wretches, to whom death seems preferable to life, tormenting themselves in deciding between poison or the dagger as means of self-destruction, or whether they shall choose to suffocate themselves or to leap from some lofty place, as if so many preparations were necessary to break the feeble tie which unites the body and the soul. Coma did nothing of this sort, and found death by holding his breath within his body.'

"Appian relates that when they had hidden the sword of Cato of Utica, in order to prevent him from destroying himself, he said: 'I can take my life without a sword, I need only hold my breath to accomplish this.' He also speaks of a soothsayer, who cried: 'All but myself will be slaves;' and suffocated himself like the former.

"George Cheyne (*The English Malady*, p. 307; London, 1773,) narrates in detail the more modern instance of a Colonel Townsend, who suffered from renal disease with constant vomiting. He came from Bristol to Bath

in a litter, and Drs. Baynard and Cheyne were called to him. 'We saw him twice a week, but as the vomiting persisted in spite of all that we could do, we despaired of the cure. He sent for us early one morning, and we visited him with Mr. Skrine his apothecary; his intellect was clear, his mind appeared tranquil; his servants were around him, he had executed his will and put his affairs in order. He told us that he wished to inform us of a peculiar sensation he had observed in himself for some time, namely, that when he made a certain effort he experienced a sense of approaching dissolution, he lost all consciousness, and then in some manner returned to life. We heard him with astonishment, and could hardly credit, much less explain, phenomena which accorded so little with what we knew. We could not believe without seeing, and we were unwilling that our patient should repeat this experiment in consequence of the dangers which might result in his enfeebled state. He conversed with us for a quarter of an hour in regard to his sensations, and insisted upon inducing them in our presence.

"His pulse, which we all examined, was small and thready: the pulsations of his heart were as usual. He laid upon his back, and was quite motionless. While I felt his pulse, Dr. Baynard placed his hand upon his heart, and Skrine held a mirror before his mouth. I found that his pulse became feebler and feebler, until I no longer felt anything; Dr. Baynard could no longer perceive the impulse of the heart; Mr. Skrine could see no moisture upon the polished glass. After repeated explorations we could find no signs of life. We conversed for a long time in regard to these peculiar phenomena, which appeared to us inexplicable; but as the patient continued in the same condition, we began to think that he had carried the experiment rather too far, and was dead in reality; and we were about to leave him. This state had lasted half an hour, until nine in the morning in autumn. As we were going we observed a movement of his body, and we found that the pulse was gradually returning: he commenced to breathe softly, and to speak in a low tone; a little while after he ordered that the notary should be called, he added a codicil to his will, bequeathed different legacies, received the last sacraments, and expired tranquilly at five in the afternoon.

"At the autopsy the abdominal and thoracic organs were found healthy with the exception of the right kidney, which was four times thicker than the left, distended and soft. The patient had passed a serous matter with his urine. When we opened the kidney it was filled with a white substance like chalk, and its tissue was destroyed by what I called cancer."

Dr. Cheyne simply relates what happened, without offering the slightest explanation of the causes of Townsend's condition; every one, therefore, can form any idea he chooses in regard to this case.

Many physiologists attribute the suppression of the circulation to the interruption of the respiratory movements, and have sought to explain thus these histories, supposing them credible. Other physiologists contradict the first, and my experiments demonstrate that the arrest of the respiration does not destroy immediately and mechanically the pulsations of the heart, although I do not deny that a prolonged suspension of the chemical action of the respiration would have a mediate influence upon the circulation; but this effect takes place so tardily that it cannot explain the phenomena which I have observed.

Numerous experiments have convinced me that the respiration may be suspended during a considerable time, without a suspension of

pulse, and even without a sensible modification of its frequency and amplitude.

The essential point in these experiments is to arrest the respiration without compressing the chest or the organs which it contains. As this is done with difficulty when the glottis is closed, I have left the glottis open, and have held my breath by keeping the diaphragm and walls of the thorax fixed in the position of inspiration or expiration, or in a position between the two.

I held my breath for half a minute, (30 pulsations;) for when this function is suspended for a longer period, convulsive contractions of the muscles interfere with the experiment. Besides this period is sufficiently long to note the mechanical changes produced in the circulation. The trials were made with the body in a horizontal posture. The respiration was suspended, the lung being filled with air in different degrees: 1, in ordinary inspiration; 2, in ordinary expiration; 3, in forced inspiration; 4, in forced expiration. My brother counted the pulse, and made a signal at the end of ten beats; Professor Hankel timed these periods with a chronometer.

In all these experiments the size and fullness of the pulse underwent no modification during the suspension of the respiration.

(The author here furnishes a very minute tabular statement of these four series of experiments; we will only transcribe the summary of them which he offers.)

The mean duration of 30 pulsations in all of the experiments was:

	Before suspension of respir.	During suspension of respir.	After suspension of respir.
The thorax in the position of ordinary inspiration,	29″.7	29″.8	30″.2
Of ordinary expiration,	28″.8	31″.2	30″.0
Of forced inspiration,	30″.3	31″.5	29″.5
Of forced inspiration,	30″.5	29″.8	30″.0

It results from these experiments that the pulse was unaffected by holding the breath after a forced inspiration or an ordinary expiration. In the two other positions of the chest the pulse became somewhat slower, but this phenomena was proved by other experiments to depend upon accidental circumstances. It is therefore established that the suspension of the respiration, no matter what quantity of air is contained in the lung, has no effect upon the circulation during the first moments.

We may explain the different results at which other observers have arrived, by the fact that it is not the suspension of the respiration alone, but the compression of the thorax, the glottis being closed, which may disturb and even arrest the circulation of the blood.

The compression of the chest, even produced by the expiratory muscles alone, exercises a great influence upon the centre of the circulation for the following reasons: The air contained in the lungs when compressed being unable to find exit by the glottis, reacts by its elasticity upon the heart and great vessels and other contents of the thorax. The course of the blood in the great veins is retarded. If the pres-

sure is great enough to overcome the outward pressure which the blood exercises upon the walls of the veins, the blood no longer flows on to the heart. The small quantity of blood which is contained in the great thoracic veins, the heart and the pulmonary system, is forced into the aorta, and the heart has nothing more to propel. The pulse lasts until all the blood has entered the aorta. The heart, though empty, may still contract, without its motions being manifested through the thoracic walls.

I suppose then that if we admit the histories related in this memoir, that we must explain the death of these individuals, not alone by the suspension of respiration, but also by the compression of the thorax.

These facts have a pathological interest also; they explain the relations between many morbid phenomena. In syncope the activity of the heart is so reduced that the pulse can be hardly felt, and we see, on the other hand, a healthy man produce syncope by the voluntary suspension of the movements of his heart. We must therefore conclude that it is in both cases the suspension of the heart's action which produced the syncope.

Compression of the air in the chest occurs in a crowd of circumstances, in coughing, for example, in vomiting, sneezing, defecation and parturition; in the efforts of defecation the pulse often becomes inappreciable; we should not therefore be surprised at the appearance of phenomena which characterize the cessation of the movements of the heart. The congestions of the head following vomiting or violent coughing are also explained by this compression of the thorax and the consecutive arrest of the circulation.—*Archives générales*, p. 399.

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2. *Of the Extent of Surface of the Brain and its Relations with the Development of the Intelligence.* By M. BAILLARGER.

The author proposes in this essay, to determine the extent of surface of the cerebral hemispheres, and to enquire whether there exists, as has been asserted, any relation between the extent of this surface, and the development of the intelligence. The following are his conclusions:

1. The human brain can be almost completely unfolded, without laceration, by removing little by little the internal white matter.
2. The extent of the cerebral surface, thus unfolded is about 750 square inches.
3. The surface of the human brain proportioned to its volume, is much less extensive than that of the inferior mammalia.
4. It is impossible, without committing serious errors, to judge of the relative extent of surface of different brains of various volumes, only by observing the number and prominence of the convolutions.
5. The degree of development of the intelligence, far from being in direct ratio with the extent of cerebral surface, is rather inversely as the extent of this surface.—*Annales médico-psychologiques.* Jan. 1853.—(*L'Union Médicale.*)

3. *The Physiology of Sea-sickness.* By MARSHALL HALL, F. R. S.

I have recently made a voyage from Liverpool to the United States, and I seized upon this occasion to study the physiology of sea-sickness.

All of the phenomena of this disease induce me to believe that the spinal cord is the nervous centre, and that the pneumo-gastric, diaphragmatic, intercostal, and abdominal nerves, are the eisodic and exodic nerves which, in connexion with this centre, present the origin and course of the catastaltic and diastaltic actions, in these circumstances.

It appeared to me that the rolling and pitching of the ship influenced especially the course of the blood in the spinal cord; when the vessel rises, the force of the impulse of the blood upon this organ is diminished; when it falls, the impulse is augmented. There is then constant change in the force of this impulse; from which results perpetual excitement and irritation of the cord, of the pneumo-gastric and diaphragmatic nerves, etc.

The movements of a carriage or of a swing, if they are long continued produce the same effects upon very susceptible persons.

The influence of the position of the body, by which the movements of elevation or depression are increased or diminished, is very remarkable. If a horizontal position in the direction of the axis of movement of the vessel is selected and is preserved, the traveller may escape sea-sickness, and it is only upon changing this position that he suffers the first symptoms.

At first he experiences an indescribable uneasiness, a faintness at the stomach; presently acidity, eructation, hiccough supervenes; these symptoms being produced by the influence of the pneumo-gastric and diaphragmatic nerves upon the secretions and movements of the stomach, of the diaphragm, etc. Almost simultaneously the patient becomes pale, and the action of the heart becomes feeble and irregular, and sometimes palpitations occur; this also is an affection of the pneumo-gastric nerve. One of my friends suffered for years from irregular action of the heart, after experiencing violent sea-sickness during a voyage of a few hours. Lastly, nausea occurs, and distressing vomiting; the stomach is first emptied, and afterwards bile, mucus, etc., is ejected.

These phenomena are repeated by paroxysms; a suffocating sensation of heat compels the individual to throw off the clothing, the warmth of which had been previously agreeable; then vomiting takes place, the pores of the skin are opened and a cold perspiration occurs, which is followed by a sensation of chilliness. It is impossible to convey any idea of the complete prostration that the patient experiences during an attack of sea-sickness, both morally and physically. In one case, that of a young lady, this cruel disease terminated in death.

Before and after the paroxysms, the action of the pneumo-gastric nerve is defective; its influence as an internal excitor of the respiration, is imperfect; this state is relieved by the free exposure of the face, and

even of the hands, to the open air, and especially to the fresh wind, and by strong voluntary efforts of inspiration.

If the sea becomes calm, one becomes habituated to a slight movement, but if a storm arises, he is presently sick again. I had enjoyed six days of physical comfort, when we experienced the effects of a gale; I suffered from sea-sickness for forty-eight hours.—*Comptes-rendus de l'Académie des Sciences.* Mar. p. 601.

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4. *Of the vessels of the Follicles composing the Glands of Peyer.*—By A. KOLLIKER.

The author having examined specimens of Peyer's glands from the hare, injected by Professor Frey (of Zurich,) designed to show that the follicles were vascular, undertook researches upon recent specimens, and convinced himself of the reality of this fact. He recommends particularly, for this examination, the intestinal patches of the hog.

If the contents of the follicles are carefully extracted, the vessels may be detected, without a preliminary injection; they are capillaries of .0025 to .004 of a line, which penetrate the interior of the follicle, amid the cells and nuclei of which it is composed, and which are arranged much in the same manner as the capillaries of the cortical substance of the cerebellum. The same arrangement is observed in the solitary follicles, and the cavities of the lymphatic glands. This organization indicates that these follicles are secerning organs analogous to the lymphatic glands, and vesicles of the spleen, and assist these in effecting certain modifications of the blood, of the nature of which we are still ignorant, but which are undoubtedly subservient to nutrition.

This great vascularity of the follicular apparatus of the intestine, explains the disorders which they undergo in typhoid affections, and the influence which these lesions exerts upon the blood, and ultimately upon the entire economy.—*Gazette Médicale de Paris.* May 14th.

MEDICAL PATHOLOGY AND THERAPEUTICS.

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5. *Of Parasitism and Parasites.* By Professor LEUCKART (of Giessen.)

The majority of physicians to whom the natural sciences are unfamiliar, have still erroneous ideas in regard to the origin and conditions of existence of parasites; it is this that induces us to report the remarkable essay of the young and learned professor of Giessen. Moreover, it is necessary that the physician worthy of the name, the cultivated physician who desires to keep abreast of science, should discard

the old ideas of spontaneous generation, which science no longer recognizes, and which never served except as a cloak for our ignorance. We also invite the reader's attention to an article on this subject by Professor Siebold. (*Gaz. Méd.* 1847, p. 660, *et suiv.*)

Dr. Leuckart divides his work into two parts; in the first he treats of the general natural history of parasites; in the second he examines entozoa in particular.

Parasitism is a general law of creation, an inevitable corollary of that grand law of being, which ordains that one class shall be nourished at the expense of another. The work of destruction which carnivorous animals perform for their sustenance, is imitated on a small scale by parasites, whose organization and small bulk have placed them in peculiar conditions.

It is important to know the conditions which these creatures require in order to exist, that we may learn the possibility or absolute impossibility of facts relative to their habitation; thus some are so organized as to breathe the air; they must therefore live in such places as will permit the direct access of the atmosphere to their organs; hence whenever we are told of respiratory parasites, found in places inaccessible to the air, we should doubt the accuracy of the statements. It is different with intestinal worms, which respire by the whole surface of their bodies, and do not require the presence of atmospheric air, because they are immersed in liquids which hold oxygen gas in solution, with which they can exchange their carbonic acid.

After having developed these considerations, and supported them by examples, the author treats of the migrations of parasites, a curious study, and one of the highest importance in determining the mode in which they enter the bodies of animals. The metamorphoses which have been heretofore described, are connected, in most species, with changes of locality. The animal, when it assumes a new form, requires different conditions favourable to its vital activity, as has long been known to be the case in the majority of insects. This law is especially applicable to worms, of which, with the exception of the nematoids (round worms,) various species differ considerably at the different epochs of life; we know, for example, that helminths are not always entozoa, and it is not necessary to have recourse to the hypothesis of spontaneous generation, in order to explain their presence in the bodies of animals. We have only to discover how they enter and make their exit under different forms.

It is in the state of ova that entozoa leave the intestinal canal. Observation teaches us that as long as these ova remain in the bowels they show no traces of development, and the same thing is true of those species which inhabit the biliary passages, the bronchi, etc. In other cases they leave the body as larvæ, but very few varieties remain in a single animal during their whole lives.

They are generally introduced into the organism in food and drink. The author cites innumerable examples of parasites which pass from the bodies of different animals into the organs of the carnivora which prey upon the latter, and observes that the carnivora nourish many more spe-

cies than the herbivora; thus the pike contains few varieties that are not found in the carp, and other fishes upon which it preys. But how can beings so delicate, so soft, penetrate through membranes and other structures, even into the interior of vessels, and the parenchyma of organs. Direct observation affords a reply. Trematodes have been seen to enter the eyes of fishes, through the sclerotic; nematoids, which are without members, can penetrate membranes and enter the calibre of vessels, (hæmatozoa,) or else the parenchyma of organs (the filariæ, for example.) We thus explain without difficulty the presence of entozoa in animals. In man, who is nourished only by food prepared by cooking, it is not so easy to discover the origin of entozoa; nevertheless we know that the filariæ introduced themselves beneath the integument by perforating it; and the presence of similar forms of intestinal worms in particular countries indicates a relation between the existence of these worms and certain exterior conditions favourable to their development. The Abyssinians, for example, who are very subject to entozoa, feed upon uncooked flesh, and swallow even the intestines of certain animals, with their contents. (Bruce, Rüppell.)

We pass over the numerous and authentic facts which the author adduces, from which not only the possibility, but the reality of the migrations of certain entozoa through the tissues, is clearly proved. When these parasites reach fibrous or parenchymatous organs, such as the muscles, the liver, or the cellular tissue, they become encysted, like any other foreign bodies. Their development is then usually arrested; their genital organs become atrophied, and they are incapable of reproducing themselves by ova; this is what occurs to those worms called cystica.

The second part of Dr. Leuckart's work, in which he gives the history of helmintha in detail, is not less rich in new and interesting facts than the first. It is improper to call these beings habitually, intestinal worms or entozoa, for they may pass the greater part of their lives without the body, in the state of ova or larvæ. In the actual state of science, they should be grouped in four orders alone: The cestoids or tænias, the trematodes or distomata, the acanthocephalists or echinorynchas, and the nematoids (filariæ, ascarides, trichures, etc.)

It is only since the curious discoveries of Steenstrup, contained in his memorable work upon *alternating generation*, (generations wechsel,) that we have had an exact idea of the constitution of a tænia. Steenstrup found that peculiar larvæ existed, which he called nurses, which reproduced themselves without sexual congress, and gave birth to other larvæ capable of arriving at sexual maturity, and of producing eggs. In the tænia, the head is the nurse larva. The head then, properly speaking, is the whole animal. This confirms the ancient opinion that the cure of tænia is not complete until the head is expelled. When it has existed a certain time, it evolves a joint, then a second, then another which is placed between the head and the joint first produced, and thus it continues to increase. The hindermost joints are the oldest and at the same time the most perfect, and they soon become filled with mature ova. The head never produces ova.

Dr. Leuckart illustrates by plates this remarkable development, which he compares to the development of certain medusæ, which pass through the state of polyps, before reaching their ultimate form.

The larvæ of tænias, that is, the head without articulations, are frequent among animals, according to the researches of Van Beneden, but they are not developed in their temporary abodes, at least this is what is observed in the inferior animals; it is only in the bodies of vertebrata that they commence to send out articulations. The author here enumerates many facts in proof of the migration of these larvæ.

A not less curious order of facts treats of the degeneration of these larvæ of the tænia, and their transformation into vesicular worms. In their migrations these worms may *get lost*, to use the author's expression, and may reach organs unfavourable to their ultimate development. Sometimes the degeneration is limited to an arrest of development of the segments, which do not arrive at sexual maturity; as has been seen in fishes, in which the same species have been found out of the intestine, and in the intestine, those within having their normal development, and those without, encysted in the liver or mesentery, being stunted. In the same manner, the ligules only produce eggs when they have passed from the bodies of fishes into the bodies of birds. Often, particularly in birds and mammalia, the oviferous segments are not produced, but are replaced by vesicular appendages. Such is the origin of those cystic or vesicular worms, which were long classed in a special order, but which should now be classed among the cestoidea. As long as these vesicular worms, the cystocerci, for example, remain in those conditions under the influence of which they were produced, they retain their form, but as soon as they reach a locality favorable to their evolution, they change their forms, lose their vesicular appendages, and push out articulations like true tænias. This fact has been placed beyond doubt by the curious researches of M. Kuchenmeister, (*Prager Viertiljrhrechrift*, 1852,) who observed the transformations of cystocerci which he had given to dogs and cats in their food. Dr. Leuckart affirms that the *cystocercus fasciolaris* of the liver of the mouse becomes the *tænia crassicollis* of the intestine of the cat.

These singular transformations of tænias may go still farther. Under certain circumstances the vesicle of the cysticercus acquires the faculty of producing joints; there results a colony of cysticerci implanted upon a common vesicle, or the form which has received the name of *cœnura*.

At other times the larva itself, or head of the tænia, is changed into a cyst before producing a vesicular appendix; thus are formed the acephalocysts or hydatids, which are simple or compound shut sacs, frequently containing numerous smaller cysts, either free or attached to the parent cyst. The echinococci are allied to hydatids, and differ from them in this respect, that the internal wall of the cyst produces the larvæ of cestoids with their normal forms, that is with suckers and rings of hooks. The echinococcus is to the hydatid what the cœnura is to the cysticercus. Hence we see that the vesicular worms are all

tæniæ which have been arrested in their development, and are all more or less abortive.

The trematoda, or flat worms with suckers, propagate themselves by alternating generation. They live in the water while larvæ, and pass into the bodies of insects and aquatic mollusca, they become encysted and remain stationary until they enter the bodies of some other animal (fish, bird.) They also can penetrate membranes, and traverse the parenchyma of organs.

We will omit the echinorrhynci, for they do not exist in man, and we know little of their different conditions.

The nematoids present also various peculiarities. They undergo no transformations, and yet they migrate.. Their ova, expelled with fæcal matter, are developed in the water or humid soil. They enter the bodies of animals, or are introduced beneath the skin. If they do not find conditions favorable to their development, they do not arrive at sexual maturity. Those incomplete nematoids, generally called filariæ, are found in the muscles, in serous membranes, in the eye, etc. To this class of degenerated worms belongs the *trichinia spiralis*, an encysted worm found in the muscles, which was discovered by Owen. The author places the filariæ of the blood in this same group, regarding them also as worms which have *lost their way*. Lastly, the gregorines, those singular parasites frequently found in the invertebrata, and regarded as formed of a single cell, are only degenerated nematoids, comparable to the acephalocysts of cestoid worms.

We have only glanced at the vast field which Dr. Leuckart has treated with great skill and science. What we have said will suffice for the majority of readers, who have thus presented to them the present state of science as regards the history of these singular creatures. *Gazette Médicale de Paris*, May 7, 1853. *From Vierordt's Archives.*

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6. *Diabetes consequent upon a Fracture of the Cranium.* By Dr. SZOKALSKI.

This case, which illustrates so beautifully the pathology of glucosuria experimentally established by M. Claude Bernard,* was communicated to the Imperial Academy of Medicine at the meeting of April 19th:

"A vine-dresser of Savigny-sous-Beaune, aged 33 years, robust, sanguine, and enjoying excellent health, fell from a steep rock last January and wounded his head severely. He was taken up insensible and carried to his house, and I was summoned to see him.

"Having washed his face and shaven off his bloody hair, I found a lacerated wound between two and three inches in length upon the vertex. Upon raising the flap of skin, and carefully removing the coagulated blood, I perceived that the bone was fractured and depressed near the sagittal suture. The depression was caused by two fractured portions of the left

* See Donaldson's *Report of Bernard's recent discoveries.* (American Journal of Medical Sciences. Vol. 22, p. 30, et seq.)

parietal. The rest of the cranium was intact, but the face and scalp were severely contused. The right pupil was contracted, but the retina preserved its normal sensibility. As to the other functions of the economy, I remarked three anomalies; numbness and formication in the right side of the body; limited paralysis of the right foot, and increased sensibility of the right shoulder. This exaggerated sensibility was limited to the integuments of the deltoid muscle, which were neither red nor swollen, yet the contact even of the shirt was intolerable. The patient could move the right thigh and leg, but neither the foot or toes obeyed his will; and the sensibility, diminished at the ankle, was almost obliterated on the plantar surface.

"The patient was copiously bled, and the wounds of the head were united by adhesive strips, except the portion which corresponded to the fracture of the cranium, and cold water dressings were applied. The patient passed a bad night; somnolence alternated with agitation and delirium, and the fever was high. I therefore advised revulsives to the inferior extremities and again employed the lancet. I at last succeeded in mastering the traumatic reaction, but the mouth exhaled a sour odour, and the tongue became heavily furred. These circumstances, together with several attacks of bilious vomiting, determined me to prescribe a saline purgative; but copious, fætid evacuations did not cause any relief. The patient complained of prostration; his pulse was feeble and rapid, his skin was dry, and he was tormented with burning thirst; it was then that I learned that he passed his urine frequently and in large quantity.

"I attributed this circumstance to the large quantity of liquids ingested, which amounted to nearly five quarts daily, and I directed that the drink which the patient consumed, as well as his urine, should be measured. The latter was found to exceed the former by about a pint. An analysis of the urine demonstrated that it was charged with sugar; it was pale, inodorous and without deposit; when boiled with Trommer's reagents it became of an orange color, and deposited the red oxide of copper. Heated in a capsule with the hydrate of lime, according to Mialhe's directions, and also with excess of liquor potassæ, (the test proposed by Bouchardat; Moore's test,) it was transformed into a deep brown liquid. Therefore there was no doubt of the existence of glucosururia. I accounted for this by the concussion, by *contre-coup*, of the floor of the fourth ventricle, for nothing authorized me to believe that the medulla oblongata was more seriously injured. Under this point of view the diabetes did not seem to require active treatment; accordingly alkaline drinks, saline purgatives and the interdiction of farinaceous food, were the only measures which I employed. If it is true, I argued, as M. Bernard assures us, that diabetes disappears spontaneously in animals in a short time after the puncture of the medulla, it ought surely to disappear in my patient.

"This anticipation was entirely realized. The fifth week after the accident the converging strabismus of the right eye ceased, and the right foot could be moved, and the urine, though still copious, furnished much less sugar.

"The patient is now, three months after the accident, entirely re-established. The diabetes has ceased, the paralysis has entirely disappeared, only in the right shoulder the sensibility is still exaggerated. The wound of the head, which has become fistulous, secretes a serous liquid, but is in a fair way to cicatrize."

This observation, the less important details of which I have omitted, merits attention on many accounts, but is particularly interesting in regard to the diabetes, which may be justly called traumatic.

This individual enjoyed excellent health, and nothing authorizes us to suspect that glucosuria existed before his accident. The limited fracture, and the depression of the cranium over the longitudinal sinus, exposed the cerebral substance less than if it had occurred farther from the median line. Nevertheless the left hemisphere was disturbed by it, as was manifested by the hemiplegic numbness of the opposite half of the body, the paralysis of the foot and the hyperæsthesia of the shoulder. To these phenomena was added a diabetes, which persisted for four weeks and diminished gradually with the progress of the cure, and disappeared as soon as this was complete. It is impossible to admit a fortuitous coincidence in this chain of circumstances. If analogous cases have hitherto escaped the notice of observers, it is because the marvellous connection between the encephalon and production of sugar in the economy was far from being suspected. From the moment that this connection was demonstrated by direct experiment, we had a right to expect that traumatic lesions of the brain would sometimes cause diabetes, jaundice, bilious vomiting, etc. The material proofs of such a coincidence have been wanting until now. The surgeon henceforward cannot dispense with an analysis of the urine in traumatic lesions of the head; they will furnish him with precious practical indications, and will supply at the same time elements important in completing the history of diabetes, which now so deeply interests the learned world.—*L' Union Médicale*, No. 48.

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7. *Coincidence of Frontal Neuralgia and Intermittent Fever.* By M. PIORRY.

A number of patients in M. Piorry's ward, affected with intermittent fever, have presented in addition to the enlargement of the spleen, which the skilful professor demonstrates unerringly by pleximetry, a morbid complication which appears quite constant. M. Piorry asserts that he has found frontal neuralgia in every case of intermittent fever which he has examined since this point arrested his attention. What is the physiological reason of the association of two diseases which appear to have no relation to each other? Is it the connection which exists between the fifth pair and the nerves which are distributed to the spleen through the medium of the great sympathetic? This phenomenon, at all events, yields readily to the sulphate of quinia, and after two or three days' employment of this sovereign febrifuge, the supra-orbital neuralgia disappears entirely.—*Abeille Médicale*, May 5th, 1853.

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8. *Raw Meat in the Diarrhœa of Infants.* By M. TROUSSEAU.

At the time of weaning, and for the first year following, children suffer from diarrhœa which is with difficulty overcome by pharmaceutical preparations. The evacuations are frequently accompanied with anæmia which is not relieved by the ferro-manganesian preparations of our pharmacopœias. M. Trousseau administers with success, in these

cases, raw meat finely hashed and slightly salted. In the case of a child three years old, he gave from four to eight ounces of it every morning. The raw meat retains in its fibres a certain quantity of blood; this organic liquid contains iron and manganese, but in combinations much more natural and of easier digestion than the pharmaceutical preparations. Raw meat is preferable to cooked, and beef blood is much better than raw meat. "We will add, says the *Presse Médicale Belge*, that it is a vulgar custom at Brussels and many other of our cities, in certain affections, to drink the warm blood of the beef, on an empty stomach, each morning gradually increasing the quantity. We have seen hæmoptysic persons, wasted by frequent hemorrhages, recover from the loss of blood in a short time, by drinking half a pint of blood each morning at the slaughter house. No known pharmaceutical article can equal this ferro-manganesian preparation, compounded by nature, and ready to be digested and assimilated. But it is necessary to drink the blood the moment the beef is killed, as it loses its properties partially by cooling, from the time the globules and serum begin to separate. Children take the blood willingly, though many adults will object to it. Unfortunately, however, it is always difficult to obtain the blood before its coagulation.—*Journal de Chimie Médicale.*

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9. *On the Treatment of Scarlatina.* By Dr. HAMILTON ROE.

Before we can form a correct notion of the treatment that is likely to prove useful for any disease, we must have ascertained its causes, and its consequences or terminations: for, unless we have done this, we cannot know what is to be effected, and what prevented; and, therefore, we have nothing to guide us in selecting remedies. The opinion now generally entertained by the medical profession respecting scarlet fever, is, that in common with typhus fever, small-pox, cholera, and other epidemics, it is caused by the introduction of some poison into the system, from inhaling air in which miasma is suspended, or some noxious gas mixed; that when the poison is got rid of pretty soon, recovery takes place; but when it is not, that it induces disease of one or more of the vital organs, which often destroys life. The kidneys, bronchi, and lungs, are those most frequently affected, and, therefore, scarlet fever may be said to terminate in Bright's kidney, bronchitis, or pneumonia. Rheumatism also has been observed by Dr. Golding Bird, to come on occasionally after it.

The first indication of treatment when a poison has either been taken or entered the system is, to give an antidote for it, and this we should do in all cases of epidemic disease, if we could; but we are not acquainted with any medicine which possesses the power of destroying an animal poison within the body; we are, therefore, obliged to direct our efforts towards counteracting its effects, and assisting the system to throw it off through some of its emunctories. The symptoms or effects which are usually first observed are, chilliness, rigors, unoppressed circulation, and a torpid and depressed state of the nervous

system, which sometimes proves speedily fatal. I have known scarlet fever to cause death within twenty-four hours after the eruption has appeared, and small-pox has frequently done the same. To counteract the effects just enumerated, it is considered by many medical practitioners advisable to give emetics as early as possible after the disease has set in, as having a tendency to cool and soften the skin, and to induce it to perspire; they also divert the blood from the internal organs to the surface, and help the system to rid itself of the poison. The medicines usually next given are intended to fulfil one of the following indications according to the view of the practitioner—to increase some of the natural secretions, in the hope of their carrying off the poison—to strengthen and support the system under the efforts it will make to get rid of it—or to destroy its power by chemical action. Dr. Hamilton, of Edinburgh, advises purgatives with the first view; carbonate of ammonia, bark, and stimulants have been recommended by others with the second; hydrochloric acid and chlorine, with gentle aperients, have long been used in this hospital and elsewhere with the third view. The chlorine mixture is made by mixing ten grains of chlorate of potash with one drachm of dydrochloric acid, and when the chlorine is all evolved, adding water to it by degrees, until it is taken up. Diluents and liquid nutriment are also given freely, and, under this mode of treatment, a large majority of patients affected with epidemic diseases recover. Scarlet fever is to be treated on similar principles, for we have no antidote to its poison; belladonna has been asserted to be one, and a prophylactic also against it, but on no better grounds than that it causes the same symptoms and appearances; you will therefore not be surprised to hear that its frequent failures prove that it does not possess the power of either one or the other.

Organic affections of the lungs are known to be amongst the sequelæ of scarlet fever, but are not expected to occur at the early stage of it.

A form of congestion, unaccompanied by any difficulty of breathing complained of by the patient, or visible to the eye, is known to be a common occurrence; we are therefore always on the watch for the first symptoms of it. But not so in scarlet fever, for death in the early stage of it, that is, soon after the appearance of the eruption,—is supposed to be caused by the shock given to the system by a poison; if it occur at a later period of the same stage, but before the eruption has disappeared, it is usually attributed to the state of the throat and the depression of the vital powers, which are supposed to be the later effects of the same cause; and it is only after the complaint is over, that organic disease of the kidneys, lungs, and bronchi, are believed to occur.

I suspect that in many of those instances in which the state of the throat and debility are supposed to be causing death, it is congestion of the lungs that in reality is doing so, and they are merely its effects or consequences. To confirm or remove this suspicion, I shall request all my medical friends who have the opportunity of seeing much scarlet fever amongst the poor, to examine the bodies of those

who die of that disease—to note the alterations of structure they observe, and the stage at which the signs of their presence were first perceived; and until statistical inquiries have removed all doubts as to the cause of these peculiar symptoms, to try tartar-emetic whenever they present themselves. Meanwhile the lessons we have to learn are, that in the early stages of other fevers besides typhus, congestion of the lungs may take place, and that, owing to that diminished sensitiveness to the want of air which probably all fevers produce, such a condition may be unaccompanied by any consciousnes of its existence on the part of the patient, or the characteristic rational signs which are always observed when there is no specific fever to mask them; and therefore that in all fevers we should examine the lungs daily.—*London Lancet.* June.

MATERIA MEDICA, PHARMACY, AND MEDICAL CHEMISTRY.

10. *Saccharate of Lime.* By M. Trousseau.

The virtues of this preparation are due to the fact that sugar in solution is capable of absorbing a very large quantity of lime. The compound is made by saturating simple syrup with lime, and then filtering it. A perfectly transparent mixture is thus obtained, which is not troubled by admixture with water, and is characterized by an extremely alkaline taste. This syrup combining with water in any proportion, is a convenient and valuable mode of administering lime. The attention of physicians was first called to the article by Doctor Capitaine, adjunct to the Faculty of Medicine, and it was first employed by myself at the Necker hospital, in the treatment of the chronic diarrhœas of children. The dose for an infant is from a fourth to half a drachm, and for an adult, from one drachm to two and a half. At the Necker hospital, I was in the habit of mixing a small portion of this preparation with the milk allowed each suckling during the day, and it seemed to me to obviate the tendency of the milk to acidity in the stomach, and to prevent the disposition to diarrhœa so common in children of a certain age at particular seasons. In comparing the effects of the saccharate of lime with those of the bicarbonate of soda, I found the former to possess marked advantages.—*Trousseau, Traité de Thérapeutique.*

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11. *On Cod Liver Oil.* By Dr. De Jongh.

[A Monograph on this subject has recently appeared in Paris, from the pen of Dr. De Jongh, of the Hague. Cod Liver Oil has so speedily acquired reputation in a variety of affections, that we may well

doubt whether the enthusiasm of the moment alone, has sufficed to bring a new remedy so universally into vogue. Everything seems to indicate that the time will not arrive, when we shall say of it, as we are forced to say of many articles of the Materia Medica: "When cod-liver oil still effected cures . . ." Dr. De Jongh has carefully and thoroughly examined the three principal varieties of cod-liver oil, in regard to their commercial history, their therapeutical effects, and their chemical constitution. We subjoin some of the practical conclusions at which this author has arrived.]

Analysis demonstrates that the pale varieties of cod-liver oil are richest in inorganic principles, and particularly in iodine. On the other hand experience shows that the deep coloured oil acts much more promptly and efficaciously than the pale variety. From this the necessary inference is, that if iodine is active in cod-liver oil, it is not the only active principle, and that the useful properties of this drug are to be sought elsewhere. Another proof of this, is the fact that it is impossible, in the majority of cases, to substitute with advantage the iodized oil of Marchal (de Calvi) and Personne, for the fish-oil; and that the preparations of iodine are less efficacious in scrofulous diseases than cod-liver oil.

It is evident that the organic principles, colouring matter, resin, extractive, whatever may be their name, principles of the composition of which we are ignorant, and which chemistry cannot imitate, are almost the only agents which endow cod-liver oil with activity. On this point we entirely agree with Champouillion, who says that he would employ scarcely any other than the *black* oil, the oil consumed entirely in the preparation of leather, did not its fœtid odour and disgusting taste make patients invincibly repugnant to it. But though the black oil can scarcely be administered, yet the deep-coloured oils are readily borne, even by the most delicate; as to the pale oils, though their appearance is much more agreeable, we proscribe them as almost inert, notwithstanding they are so rich in iodine.—*Gazette des Hôpitaux*, No. 51.

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12. *Butter in place of Cod Liver Oil.* By M. Trousseau.

Cod liver oil is an alterative restorative aliment, in a word, an analeptic medicine, by the aid of which we counteract the disorganizing action of tubercles. The only inconvenience of this oil is that it is sometimes badly digested. In this case, M. Trousseau replaces it with advantage, mainly in his private practice, by the following composition, which he advises practitioners to introduce into domestic therapeutics. Fresh butter, ℥jv.; iodide of potassium, gr. j.; bromide of potassium, grs. jv.; common salt, ʒss.* This butter is consumed in the course of the day, spread upon bread in the ordinary manner.—*L'Union Médicale.*

*We take it for granted (knowing that French butter is never salted) that the salt is only intended to render the butter palatable. The other ingredients may therefore be simply added to ordinary fresh butter.—Eds.

13. *Goître and Cretinism.* By M. Ad. Chatin.

Fully and Saillon are two large villages situated nearly opposite to Martigny, on the right bank of the Rhone. They are both upon the the declivity of the mountain, amidst lovely vineyards; the houses are of one or two stories, and are generally elevated upon posts. They are swept by the same winds, and have a common atmosphere, which is often rendered humid by the exhalations of the Rhone, of neighbouring rivulets, and of the swamps in the valley. They both have a southern exposure; their inhabitants are considered the most comfortable in the Valais. Fully and Saillon, separated only by a hollow in the mountain, appear to present conditions as closely analogous as possible. Nevertheless Fully is known throughout the Valais as the locality in which the inhabitants are the most universally affected with goître and cretinism, while Saillon from time immemorial has been exempt from these diseases. As everything else appears the same in the two villages, one is astonished at the contrast offered by the inhabitants, and the fruitlessness of all efforts to discover its cause, has made many regard the problem as insoluble.

I went to Fully and to Saillon in order to verify what I heard, and at all events to collect materials for analysis. I found, indeed, that at Fully, where cretins were numerous, that every one had goître, but I encountered also a young cretin and a certain number of goîtrous persons at Saillon. A man of great sagacity, President Moulin, of Saillon, to whom I made known the object of my researches, informed me that the source from which the supply of water for the village was obtained had recently been changed; that it was only since this occurrence that goître had made its appearance in the village; that it was not impossible that the warm spring or chalybeate spring above, from which water was now procured, might in the old state of things have been of utility; that M. Barman, brother of the Swiss ambassador at Paris, at the period at which this change was made, had expressed fears in respect to the effect which it would have upon the health of the inhabitants.

I was struck with the coincidence between the change in the water used in drinking and the appearance of goître in the village, and I attached great importance to the warm spring, the water of which joined the rivulet between the new aqueduct and old, and consequently formed part of the water which formerly supplied the village. Therefore I hastened to collect:—

1. The water at present used for drinking at Saillon;
2. The water of the Salente below the warm spring, at the origin of the old aqueduct;
3. The water of the spring. This is situated a few yards above the rivulet; the clear water trickles out of the fissures of the limestone rock at a temperature of about 82° Fahrenheit; though only slightly ferruginous it still reddens the rock, and the inhabitants who use it in fever, and as a bath, call it habitually "the iron spring."

The following are the uniform results of the analysis which I made

at Martigny, and afterwards at Paris, with the care which the importance of the deductions demanded.

1. The water used for drink at Saillon (taken from the Salente, higher up than the warm spring,) is destitute of iodine, like that which supplies Fully, Brançon, Sacet and Mazimbre, which places are crowded with goîtrous persons and cretins.

2. The water formerly employed at Saillon, derived from the Salente after it had received the water of the warm spring, contained more iodine than the water drank in Paris and other places, where goître is unknown.

3. The warm spring contained at least sixty times as great a proportion of iodine as the waters with which London and Paris are supplied; it is a real ioduretted mineral spring.

From whence it follows:

I. That goître has become common in Saillon, since the water with which it is supplied no longer contains iodine as an ingredient.

II. That the mineral spring which empties into the Salente formerly supplied the necessary quantity of iodine to the water which, from time immemorial, had been used in the village.

Comment upon such facts is unnecessary. The demonstration which they supply, both in regard to the existence of a special cause* of goître and cretinism, as well as the possibility of utilizing the ioduretted mineral springs which exist in countries in which these diseases are endemic, offer all the precision which the most exact mind can demand. It will be easily understood that I hastened to convey my results to the President of Saillon.—*Compte-rendu de l'Académie des Sciences*, 11 Avril.

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14. *Alkaline Mineral Waters.* By M. Bouchardat.

If mineral waters are classed according to their utility in disease, the alkaline waters should be placed next to the sulphurous waters.

The alkaline mineral waters modify the economy powerfully; the acid secretions become alkaline; the blood, after a while, loses its plasticity. Alkaline waters were considered solvent and aperient, but practitioners asserted that they should only be employed when no symptom of inflammation was present, and when the patient exhibited little irritability of temperament; they are very useful in chronic diseases of the abdominal viscera, and particularly in engorgements of the liver and spleen, and in hepatic colic. Chronic gastritis and gastralgia, unaccompanied by organic lesions, are favorably modified by alkaline waters. Calculi of uric acid are dissolved, sometimes by alkaline waters, and their efficacy has also been vaunted as solvents of the ammoniaco-magnesian phosphate. Alkaline waters are of incontestable advantage in gouty affections.

* I admit also general or accessory causes, which may become preponderant in a locality of mediocre ioduration: such are debilitating influences of all kinds.

The springs of Vichy (season, May 15th to September 15th,) enjoy a great reputation among alkaline mineral waters. They are the most frequented mineral springs of France.

Artificial Vichy Water.

Carbonate of soda, gr. j.
Chloride of sodium, gr. ¼.
" of calcium, gr. xij.
Sulphate of soda, gr. vj.
" of magnesia, gr. iij.
" of iron, gr. ¼.
Water, deprived of air, ℥xx.
Carbonic acid gas, 3½ vol.

Dissolve the salts with a soda base; make another solution of the sulphate of magnesia, and a third of the chloride of calcium; mix these solutions and charge them with carbonic acid; decant the gaseous saline water into bottles in which the sulphate of iron, dissolved in a small quantity of water, has been introduced.

The springs of Carlsbad in Bohemia are almost equally celebrated.

Artificial Carlsbad Water.

Crystalized sulphat of soda, gr. j.
" carbonate, gr. vij.
Muriate of lime, gr. viij.
Marine salt, gr. viij.
Crystalized sulphate of iron, gr. 1-5th.
Carbonic acid water, (5 vol.,) ℥xx.

Prepare in the same manner as the Artificial Vichy Water.

The waters of Plombières (Vosges) appear to be of special efficacy in chronic affections of the intestinal canal, in rheumatism and in neuralgia. These are the most celebrated springs of the east of France. The waters may be imitated by the following formula:

Artificial Plombieres Water.

Carbonate of soda, gr. iij.
Crystalized sulphate of soda, gr. j.
Marine salt, gr. ½.
Crystalized muriate of lime, gr. ¾.
Pure water, ℥xx.

Formulaire Magistral, p. 444.

OBSTETRICS, &c.

15. *On the employment of Chloroform in Labour.* By M. CHARLES BERNARD.

This question, which has been the subject of numerous controversies, and in regard to which the majority of physicians still remain in doubt and ignorance, appears to us destined to excite renewed interest,

not only in the body medical but also in society, in consequence of the announcement that chloroform was administered with advantage to the Queen of England during her recent accouchment. Therefore we deem it proper to place before our readers a summary of the present state of this important question, availing ourselves of the most recent works upon anæsthesia. It is important to guard physicians against a dangerous infatuation and also against a systematic opposition.

It was on the 19th of January, 1847, that Simpson of Edinburgh, had recourse for the first time to inhalations of ether in a woman with deformed pelvis, upon whom he wished to practice the operation of turning. The attempt succeeded perfectly, and showed that the uterine contractions persisted in spite of the complete abolition of sensibility.

Almost simultaneously with the celebrated Scotch accoucheur, a great number of physicians, in England and France, employed the new agent in different obstetrical cases. In February, (1847) M. Paul Dubois informed the Academy of the results of his observations of six labours. M. Stoltz, at Strasbourg; M. Delmas, at Montpellier; MM. Cazeaux, Chailly, Villeneuve, etc., at Paris, continued to experiment and institute researches in relation to the new and precious method of abolishing pain. Since the substitution of chloroform for ether, the use of anæsthetics has greatly increased. At present its employment is much more universal in England than in France, where we see it reserved for a certain number of specified cases.

Before laying down rules and treating of the mode of administration, we desire to examine successively the influence of chloroform upon the uterine contractions, upon the resistance of the perineum, upon the contraction of the abdominal muscles, and upon the welfare of the mother and child.

A priori we should believe that chloroform or ether, abolishing muscular contraction, would suspend that of the uterus, either absolutely or temporarily; repeated daily experience demonstrates the contrary positively. Nevertheless, in complete anæsthesia, the contractions usually diminish in frequency, in intensity, and even cease entirely, according to the evidence of Simpson himself, an avowed partizan of chloroform. Therefore this degree of insensibility should be carefully avoided; because, whatever the Scotch accoucheur may say, it is not always sufficient to suspend the inhalations for a few moments, to reinduce the uterine contractility. Montgomery, of Dublin, has frequently observed in cases of this sort, that the uterus would remain inert for many hours.

It would appear that the abdominal muscles, depending upon animal life, should have their action suspended by the influence of chloroform. Accoucheurs have generally observed, however, that this was not the case, which M. Laugier explains by the fact that in profound collapse, respiratory movements are still executed. Moreover efforts in general, says M. Cazeaux, and those which accompany labour in particular, are only modifications of the respiratory act; this is a state in which the muscles of the thorax, the diaphragm, and the abdominal walls must

contract energetically. Lastly, as M. Bouisson observes, since the reflex or excito-motor power of the spinal cord, which causes movements in which the will does not participate, does not cease until etherization is pushed very far, the contraction of the abdominal walls during labour can be very well attributed to reflex action.

The effect of anæsthesia upon the perineum is still under discussion. MM. Dubois, Chailly and others, seem disposed to admit that etherization relaxes the floor of the perineum, but M. Cazeaux, from personal observation, and from a case reported by M. Villeneuve of Marseilles, in which a very extensive laceration of the perineum occurred, contests this opinion and adds moreover this important proposition, which accoucheurs cannot remember too well: that the resistance of the perineum is so variable in different individuals, that it is almost impossible to foresee what it will be in a given case, and in practice, the event may come at any moment, to disappoint our anticipations.

The effect of etherization upon the health of the mother and child is at the same time the most important, and the most difficult to elucidate; because in the symptoms which may complicate labour, or supervene during the puerperal state, it is necessary to take into account all the moral and physical conditions which can influence the mother. According to many accoucheurs the effect of anæsthetic inhalations is either satisfactory or nugatory. None of my patients, says Simpson, have been sensible of the last expulsive contractions; many of them, confiding in etherization, have been spared the fears with which the approach of labour had inspired them, during the latter weeks of previous pregnancies. Anæsthesia saves women from the anguish of the latter period of labour, preserves their strength, protects them from that nervous exhaustion which succeeds a painful labour; many of those who are already mothers, express their gratitude most earnestly, and declare that their condition is not comparable to that which succeeded their former accouchments. Their convalescence also is more prompt, and consecutive inflammations are much rarer and less fatal.

The security of the Scotch physician is not partaken by the French accoucheurs, and the latter are right. For all the advantages which we have enumerated are contestable and moreover counterbalanced by more or less serious dangers, such as inertia of the womb after delivery, hæmorrhage, which Duncan observed four times in 78 cases of anæsthesia, and lastly, death, of which no authenticated instance has yet been published, but which may be apprehended in labour, as well as in surgical operations, in consequence of the administration of an agent as powerful as chloroform.

Relatively to the effects of chloroform upon attacks of eclampsia, although numerous facts attest that the employment of this agent has diminished the frequency of the paroxysms or put an end to them, we cannot admit this fact as conclusive or certain. In the collapse of anæsthesia there are well marked symptoms of cerebral congestion.

In opposition to Simpson's observations upon the benefits of etherization during labour, we moreover think it right to reproduce the pic-

ture of the mother's condition in such cases, which has been drawn by M. Cazeaux:

"Instead of the agreeable conversation in which women frequently engage, instead of the maternal aspirations and all those dreams of the future which soothe the young mother, what do we see after anæsthetic inhalations? A profound sleep, which more or less resembles the coma of drunkenness or of concussion of the brain; a complete annihilation of the sensorial and intellectual faculties; thus much for the mother; an ever increasing anxiety is the share of the assistants. We add, lastly, that even supposing the physician relieved of all apprehension, he is compelled to remain constantly by his patient, to superintend the administration of the anæsthetic, to watch the state of the pulse, of the respiration and of the heart.

The effect of chloroform upon the child appears entirely nugatory.*

What are the cases which demand, or will admit, the employment of chloroform? What, in other words, are the indications for the use of this agent? The English accoucheurs advise it in the majority of labours whether natural or difficult. The French physicians, basing their conduct upon the principles which I am about to state, limit its use exclusively to difficult cases of parturition, and to the following conditions:

Chloroform is especially indicated:—

(1). In very nervous women, in order to calm the excessive agitation, and intellectual disturbance, which parturition often causes in them.

(2). In those in whom labour appears to be suspended or notably retarded by pain caused by antecedent disease, or by certain accidents, such as vomiting, cramps, violent colics, compression of the sciatic nerve, etc.

(3.) To abate irregular and partial contractions, which, notwithstanding the atrocious and almost constant pain which they excite, do not at all advance labour.

(4). In the spasmodic retraction and rigidity of the neck of the uterus.

(5). Lastly, in eclampsia.

Although the facts bearing on this point are not sufficiently numerous to decide the question, yet from the fortunate cases which have been observed, we have a right to conclude that chloroform has a good effect upon the duration, the frequency, and the intensity of the attacks. We should therefore have recourse to it.

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* As regards the immediate effect upon the child this may be true, but we can easily conceive of cases in which the child's life might be jeopardized by the anæsthetic state of the mother. An experienced accoucheur of this city once mentioned to the translator, that in a case of labour at which he had assisted, in which chloroform had been given, with the effect of diminishing the frequency and intensity of the uterine contractions, when the head was finally delivered, the cord surrounded the neck of the child; it was useless to exhort the mother to make expulsive efforts, and the life of the child, was for a few moments in imminent danger.

Ed.

As to the obstetrical operations, the majority of them demand the use of chloroform, which alleviates the suffering, renders the patient tranquil, and facilitates the manœuvres. Nevertheless, for the introduction of instruments such as the forceps or cephalotribe, as it is necessary at each moment to interrogate the patient, in order to be assured by her sensations that no portion of the uterus or vagina is included between the blades of the instrument, it is naturally desirable to refrain from the use of anæsthetics.

As to the mode of administration, that advised by Simpson is generally adopted. A drachm or more of chloroform is poured upon a concave sponge or a folded handkerchief, which is then held to the nostrils. If a short operation is to be performed, deep inhalations are to be made, in order to produce insensibility rapidly; if, on the contrary, etherization is employed against general exaltation or against pain, complete anæsthesia is to be avoided.—*Gazette des Hôpitaux.*

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17. *Of the Discussion upon the use of Ergot, at the French Academy of Medicine.* By M. MALGAIGNE.

The secale cornutum, so often assailed and defended, has been again discussed at the academy. Capuron formerly rejected it as inert; it is now reproached as being too energetic an agent. Let us examine the facts:

M. Maslieurat-Lagemard reports seven cases in which he employed ergot. Six were primiparous cases, with insufficient uterine contractions. A scruple of powdered ergot was administered in two doses to each of these women, and in a few hours, they were happily delivered of living children.

But a woman thirty years of age, in her second pregnancy, the membranes ruptured for some time, labour having commenced forty-eight hours previously, dilatation complete, but no pains for the last twelve hours, takes two doses of ten grains of ergot, by the advice of M. Maslieurat-Lagemard, who then takes his leave. The pains return, but feebly; and four or five hours afterwards, a rupture of the uterus occurs, and death speedily follows. M. Maslieurat attributes the fatal result to the ergot, regrets that he was absent, and resolves to be more cautious in employing this remedy in future.

M. Depaul, appointed to report on these facts, first acknowledges that M. Maslieurat only followed the precepts generally laid down. But he condemns these precepts. "I have long known, he says, what dangers may result, both to the mother and child, from the administration of this substance, and apart from the indications which occur in certain hæmorrhages and miscarriages, I believe that the real interests of women would not suffer greatly if it were entirely dispensed with."

Here is radicalism; and M. Depaul includes in his reprobation not only the case in which the ergot was disastrous, but the six in which it was successful. He would give the preference to the forceps.

M. Cazeaux is less positive; and yet he commences, like M. Depaul, by admitting that ergot has done more harm than good.

In the first place we shall set aside these apothegms, whose insignificance is only equalled by the facility with which they are made; *Ergot has been more hurtful than useful; its total suppression would do no harm;* to these gratuitous assertions, we can only reply by negations; those who advance them would do well to prove them. What is thus said of ergot has been said of blood-letting, of emetics, of physicians, of medicine; it is a theme for declamation, nothing more.

The true point of discussion, is the indications, the dose, the mode of administration, the *modus operandi* of the medicine, and the precautions to be taken before and after its employment. M. Villeneuve, who has the honor of introducing ergot into universal practice, here mentions some points which the reporter seems to have forgotten. In the first place, M. Maslieurat only gave twenty grains. M. Villeneuve gives a drachm, and repeats this dose twice, at intervals of twenty minutes, unless the first dose should excite the uterus to energetic contraction.

Even in drachm doses the effect of ergot is rapid, and is rapidly exhausted; so that unless it causes delivery in an hour or two, it may be regarded as powerless.

Apply these facts to M. Maslieurat's cases. In the six, delivery did not occur for several hours, thus indicating a too feeble dose. In the last case, the dose was equally small; the pains were feeble, and when the rupture occurred, many hours had elapsed, and the ergot could no longer be charged with the result.

Are there not many instances of the rupture of the uterus in which ergot has not been given? Are there not thousands of cases in which it is employed in large doses, without danger either to the mother or child? Ruptures of the womb are usually caused by softening of the uterine tissues, which ergot can neither cause nor prevent.

We should have thought that, after such striking facts, M. Depaul would deduce a contra-indication to the use of ergot in certain circumstances in which a uterine rupture was to be apprehended; for, in fact, he has only dwelt upon this danger. It is true that, by rejecting it absolutely as a means of hastening the expulsion of the fœtus, it was no longer necessary to mention particular contra-indications; yet, nevertheless, he has thought it right to mention the precautions that should be taken in order to give ergot without danger to the child.

Ergot is then dangerous for the child? This is an old accusation which should be proved before it is revived; at all events it should not be insisted upon in the face of M. Maslieurat's six successful cases. M. Depaul has portrayed the contractions caused by ergot; he has shown the fœtus, the cord, the placenta compressed by the rigid uterus, and terrified by such conditions, he exclaims: "*If anything is surprising, it is that the number of stillborn children is not greater.*" But since it is not greater, is it not because the theory, which devotes the fœtus to almost certain death, is false, at least in its exaggeration?

"My reseaches in auscultation, says M. Depaul, have long since taught me, that before coming to a decision, the fœtal circulation should be examined, and that if this was notably affected, that ergot should

never be used, and that in those rare cases in which it may be of some advantage, that the fœtal heart should be carefully observed with the stethoscope, in order that the forceps may be used, in case its pulsations become modified."

Without rejecting auscultation under such circumstances, we fear that its advantages are rather theoretical than practical, and that M. Depaul rather deviates from the real question after all.

Is it not true that in favourable presentations in a well-formed pelvis, it is desirable that the womb should contract, and the delivery terminate as quickly as possible?

Is it not true that after the waters are evacuated, inertia of the uterus is perilous both for mother and child?

Is it not true that the forceps, in complete inertia, can only extract the child by exposing the mother to redoubtable hæmorrhage?

Well, what does ergot do? It brings on the necessary contractions; it gives a chance of prompt and natural delivery; and, if the forceps is necessary, it prevents consecutive hæmorrhage. We are happy to agree on this point, with M. Cazeaux:

"When there is a mechanical obstacle to delivery, he says, ergot is evidently out of the question; but in inertia of the uterus, from prolonged labour, or from exhaustion, when the perineum is the only obstacle, ergot is then of great utility in procuring the immediate termination of the labour. If in these circumstances we use the forceps, we should first administer a dose of ergot."

A few unfortunate cases presenting a sad coincidence, a few accidents resulting from the inexperience of the accoucheur rather than from the remedy itself, do these authorize these clamours against a precious remedy?

We cordially support one remark made by M. Depaul: When for proper reasons, a physician has administered ergot to a female, it is his duty not to leave her, but to remain and diligently watch over her.

Révue Médico-Chirurgicale de Malgaigne.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIONS.

18. *Indian method of reducing Strangulated Hernia.*

A case of strangulated inguinal hernia presented itself to an English surgeon quartered in India. The patient was a young man twenty-four years of age, upon whom the ordinary modes of reduction had been tried without success. The surgeon was preparing for an operation, when a Mussulman suggested the following procedure: A large napkin was folded and laid across the lower part of the abdomen, and the ends were given to two assistants, who drew gradually upon opposite sides, thus pressing the intestines to the upper part of the abdomen. A

third assistant held the feet of the patient to prevent his yielding to the traction made upon the abdomen, while the surgeon himself practiced the taxis. The intestine situated immediately above the hernia being distended with gas, and being pressed to the upper part of the abdomen, dragged the strangulated portion with it, making the reduction complete and instantaneous.—*Gazette des Hôpitaux.*

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19. *Treatment of Accidents caused by Chloroform.* By M. NELATON.

Professor Nélaton attributes death from chloroform to syncope, and advises a practice in the appalling accidents caused by this agent, which will probably prevail over all the methods hitherto proposed. It is evident that titilating the nostrils and rubbing the hands and feet of a person who does not feel pain upon the amputation of a limb, is simply ludicrous. M. Nélaton directs that when anæsthesia has been carried too far, and life seems menaced, the patient should be placed with his head downwards and the feet elevated. He has succeeded once in restoring the respiration by these means, and M. Dénonvilliers has also obtained the happiest results by a similar practice in one very grave case. M. Ricord believes that fatal intoxication from chloroform produces death by asphyxia, and advises artificial respiration, by means of which he has been able to rescue four patients from impending death.—*Répertoire de Medecine Practique.*

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20. *Aneurism of the Supra-orbital Artery cured by the Injection of the concentrated Per-chloride of Iron.* By M. DESLONGCHAMPS.

At a meeting of the Surgical Society of Paris, March 30th, 1853, M. Larrey presented the details of a case of aneurism of the supra-orbital artery, communicated by M. Deslongchamps, a military surgeon.

A patient of the latter presented a tumour upon the supra-orbital region of the size of a pigeon's egg, in which a regular pulsation was very manifest. The pulsation was increased by pressure above the tumour, but disappeared when pressure was made below or directly upon it.

M. Deslongchamps was convinced that the tumour was of an aneurismal nature, and as its locality was favorable for that method, he determined to treat it by compression. A pad kept in place by a watch-spring, compressed the artery for twenty-five days, but the tumour did not diminish. M. Deslongchamps then resolved to employ the plan indicated by the experiments of M. Pravaz.

An aid obliterated the course of the vessel above and below the aneurism, and the operator made a minute puncture with a bistoury in the internal portion of the sac. A syringe was introduced into the sac, and about ten drops of concentrated per-chloride of iron was injected. In three minutes the tumour became hard, and no pulsation could be detected. The syringe was withdrawn, and not a drop of blood escaped.

The following day there was considerable inflammatory swelling, which was combatted by resolvent applications and repose. The second day the tumour had returned to its original volume; pulsation could no longer be detected, and after seven or eight days, during which there was a slight sero-purulent discharge from the little wound that had been made, the tumour gradually diminished in volume; about one month after the operation nothing could be seen of the aneurism except a slight redness and thickening of the skin.

L' Union Médicale, No. 42, 1853.

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21. *Of the Cure of Aneurisms by the Injection of the Perchloride of Iron.* By M. LALLEMAND.

I have received from Dr. Serre (of Alais) the history of a case of varicose aneurism at the bend of the elbow, which was treated and cured by the method of Dr. Pravaz. I cannot enter into the details of this operation; I will only mention the most remarkable features of it.

The clot formed promptly under the influence of the injection; the pulsation in the tumour ceased upon the removal of the compression of the humeral artery; subsequently the ulnar and radial arteries ceased to pulsate; the walls of the sac were invaded by inflammation, and a puncture practiced upon a fluctuating point, evacuated a small quantity of sero-purulent matter. Lastly, an eschar was detached from the walls of the sac without the supervention of the slightest hæmorrhage, and cicatrization occurred rapidly.

Thus the clots formed in the aneurismal sac, and in the brachial artery and its divisions, induced a cure as perfect as if a ligature had been applied above and below the arterial lesion, as is usually done in varicose aneurisms.

This case deserves to be placed by the side of that which Dr. Niepce reported at the last meeting, in which the aneurismal sac was formed by the popliteal artery. Five minutes after the injection of the perchloride of iron the tumour became very hard, and when the compression of the femoral artery was removed it was found that pulsation no longer existed in the sac: when the canula was drawn out not a drop of blood followed it. The next day intense inflammation sprung up; on the eleventh day fluctuation was manifested at the internal face of the tumour, and a puncture gave exit to about two drachms of sero-purulent matter, after which all inflammatory symptoms subsided; on the twentieth day nothing could be felt of the aneurismal tumour except an indurated lump of the size of a walnut. The cure was then effected in as short a period as ligatures require in order to divide vessels to which they are applied in order to cure aneurisms.

These two observations fully confirm the anticipations of Dr. Pravaz in regard to the efficacy of coagulating injections in aneurisms, and their superiority to galvano-puncture.

These cases were attended by severe inflammation. Is this an inse-

parable condition in this method? Facts are not yet sufficiently numerous to permit us to decide this point. I should observe, however, that in these cases three times as much perchloride was injected as would have sufficed to procure the formation of a clot. This excess must be rather hurtful than otherwise, considering the tendency of coagulating fluids to dissolve the clot that has been formed when they are added in excess.

We can understand this exaggeration on the part of operators employing a method which they consider insufficient rather than too energetic. Allow me on this point to present some comparisons deduced from this very subject. When ligatures were first employed in arterial lesions, it was thought necessary to use a number of waxed threads prepared like a riband, in order to prevent the too speedy section of the arterial walls; the fear of consecutive hæmorrhage induced surgeons to apply precautionary ligatures, which were more dangerous than those which were tightened. They took care also to place a ligature beyond the aneurism, puncture or wounded point, in order to avoid recurrent or anastomotic hæmorrhage. This is not all; they opened the sac and turned out the coagula, and filled the chasm with charpie and tow and absorbent substances. Time and experience were necessary to efface these exaggerated terrors and to do away with this profusion of manipulations, which only produced abundant suppuration, the destruction of obliterating clot, and the very secondary hæmorrhage they wished to guard against. Let us hope that the history of injections of perchloride of iron will be the same; that its application will be simplified daily, and its styptic proportions judiciously determined.

In the cases of MM. Serre and Niepce, cures might have been obtained by the ligature; but in M. Raoult-Deslongchamps the tumour was seated on the supra-orbital artery, and it would have been very difficult to tie the ophthalmic within the orbit. But the superiority of this over all methods hitherto proposed, would be still more striking in the case of an aneurism of the femoral artery at the groin, or of the termination of external iliac, which requires, by the ordinary operation, a division of the abdominal walls and peritoneum, the separation of the artery from the vein, etc. The dangers and difficulties of the ordinary method are equally great in aneurism of the axillary, the subclavian, the innominate artery, etc.

The successes which have already resulted from the method of Dr. Pravaz, confirm me more and more in the conviction of its superiority over every other plan. I am thoroughly persuaded that it will produce a revolution in the treatment of aneurisms, as complete and important as that which lithotrity has brought about in the treatment of calculous disorders. The instruments first invented for crushing the stone were very complicated and very imperfect, and for a long time success was counterbalanced by serious accidents and numerous failures. But lithotrity is a different affair now. The history of the method of Dr. Pravaz will resemble this.—*Comptes-rendus de l'Académie des Sciences*, p. 823.

22. *Perchloride of Iron as a Hæmostatic.* By M. MARJOLIN.

At a recent meeting of the Society of Surgery, M. Marjolin announced that in two cases of hæmorrhage he had resorted with the happiest results to the employment of the perchloride of iron.

The first case relates to a metrorrhagia depending upon a cancer of the womb. An injection of half a drachm of the perchloride of iron, diluted with a quart of water, controlled the hæmorrhage immediately.

In the second case, the pure perchloride was applied to an oozing surface resulting from the ablation of a tumour from the margin of the anus. The effect was equally prompt.

M. Guersent mentioned that he had also derived benefit from this agent at the *Hôpital des Enfans Malades.* A child of hæmorrhagic diathesis was nearly exhausted by the bleeding caused by the extraction of a tooth. After vainly employing the actual cautery, plugging, ice, etc., M. Guersent succeeded in stopping the blood by a bit of lint moistened with the perchloride of iron.—*L' Union Médicale.*

OPHTHALMOLOGY.

23. *Cases of Cataract, with Remarks.* By M. SICHEL.

In one of his recent clinical lessons, in speaking of a girl of sixteen, on whom he had operated by laceration for a secondary capsular cataract of the left eye, M. Sichel detailed the following facts relating to the history of congenital and hereditary cataract.

The father and uncle of this girl had been operated on by M. Sichel about two years previously, for soft (demi-molles) cataracts of both eyes, evidently congenital, since neither of them had ever been able to learn to read, or to follow any profession. Nevertheless, these cataracts had not become complete until the age of twenty-three years; total blindness occurring first in one eye, then in the other.

The cousin of this girl, aged fifteen years, was operated upon eighteen months ago by laceration, for a congenital, soft, lenticular cataract of the left eye, which had only become complete at the age of fourteen. His right eye is now affected with incomplete cataract.

This girl had been operated on, in both eyes, by reclination, while in the provinces, but she had not recovered her vision, because both capsules had become entirely opaque. After M. Sichel had lacerated the capsule, a shred still floated behind the internal superior portion of the pupil. M. Sichel, in such cases, employs a simple plan which he has not seen mentioned by any author. It consists in requiring the patient to lie on that side towards which the detached capsule inclines, towards which, in this position it is carried by its own weight; it finally disappears behind the pupil, and contracts adhesions with the iris.

The professor remarked upon the singular coincidence of congenital cataract occurring in two brothers, and apparently becoming hereditary in their children, although in the ascending line no trace could be found either of congenital or senile cataract.

Differential Indications for the various operations for cataract.—At the same clinical lesson, four soft lenticular cataracts, were extracted from a man of seventy and a woman over sixty. A woman of fifty years underwent two operations by laceration for soft cataracts. Two other cataracts, of the hard variety, occurring in a man of nearly seventy years, were treated by depression.

M. Sichel has no exclusive predilection for any method; he employs all, according to the special indications offered by his cases. He depresses hard cataracts, at all ages, although he prefers to extract them in the aged, in order not to leave within the eye a lens, which has become a detached and irritating foreign substance, capable of inducing violent inflammation of the internal membranes, which is combatted with difficulty in individuals whose eye forbids the employment of active anti-phlogistic treatment. He operates by laceration upon all soft cataracts occurring in subjects under forty. He practices extraction in soft senile cataracts, because the reclination or laceration of such cataracts is followed by swelling of the lens, which causes compression of the humours and violent inflammation. If this inflammation is treated vigorously, the constitution is enfeebled and marasmus is easily induced; if it is timidly opposed, it occasions disorganization of the internal membranes and incurable amaurosis. In young persons, especially in children of a tender age, the tolerance of operations practiced with the needle by a skilful hand, is very great, and the traumatic reaction is inconsiderable.

After these indications, the normal operation, or the operation of election, is extraction for soft senile cataracts; laceration for the soft cataracts of the young, and especially for congenital cataracts, which rarely present great consistence: depression for hard cataracts of all ages, although in senile hard cataract it is sometimes preferable to extract, in order to avoid intense internal inflammation.

M. Sichel always performs extraction of the lens, by the superior section, which offers great advantages as regards the prompt and complete cicatrization of the wound; the upper lid forming a sort of retaining bandage, the good effects of which are assisted by a mode of dressing peculiar to the professor. This dressing consists in applying successively: five adhesive strips; graduated compresses upon the superior lid, which are narrowed from below upwards, in order to exercise compression upon the edges of the wound; lastly, a roller, which encircles the compresses, and retains them.

This mode of dressing is beautifully delineated in Pl. xvi. of M. Sichel's magnificent Ophthalmic Iconography, recently published.

Gazette des Hôpitaux.

24. *Of Kopiopia, its Nature and Indications.* By M. TAVIGNOT.

Kopiopia, a modern word, derived from κοπιος, *fatigue*, is nothing else than a tendency to fatigue of the eyes, carried to such an extent, that any continuous use of these organs becomes impossible.

In fact, a person affected with kopiopia, cannot exercise vision upon near objects for more than a quarter of an hour, or three quarters of an hour at the utmost, without experiencing a sensation of tension in the orbit, and a disturbance of vision which renders objects indistinct.

After a few minutes repose, correct vision returns, it is true, but a resumption of the same occupations quickly produces the same results, so that finally a person affected with kopiopia, without being deprived of vision, is unhappily unable to make use of it for his ordinary avocations.

Kopiopia is certainly not a new disease. MM. Bonnet and Petrequin should not delude themselves by thinking so; the only novelty in the works of these physicians on this subject, is the treatment which they have adopted: ocular myotomy! In fact, this affection has long received the attention of ophthalmologists, under the designation of *hebetudo visûs*, or *asthenopia*.

Kopiopia, while its nature remains the same, still supervenes under various conditions; it may occur in the young or in adults; alone, or associated with strabismus.

From numerous facts which we have carefully observed, we do not hesitate to assert, that true kopiopia has no conection with amblyopia or amaurosis. *It evidently results from an insufficiency in the adaptation of the eye to close objects, during a period sufficient for the regularity and permanence of the visual functions.*

This fault of adaptation may depend upon two causes differing in reality, but which lead to the same result. Thus, when a far-sighted person prolongs the effort of reading or writing, preserving the distance at which he formerly placed the object from his eye, kopiopia supervenes the moment the muscular system can no longer maintain permanently a new adjustment of the eye. When an individual who is not presbyopic, has the muscular system of the eye slightly developed, the same phenomenon takes place. The effort required of the muscles to fulfil their functions, is followed by a condition of atomy or relaxation which is incompatible with distinct vision of close objects.

According to this doctrine, persons affected with kopiopia cannot become permanently near-sighted. Their myopia being unstable, perception ceases with it, and by the very fact of this instability.

If we recollect that a person suffering from kopiopia is relatively too far-sighted, in the sense that he lacks the faculty of shortening his vision in order to devote himself to occupations requiring minute visual attention, we can understand the action of the means by which kopiopia is infallibly cured, when it is without complications. To shorten the visual range, we have only to use convex glasses; and this is, in fact, the only means of restoring their primitive strength to the eyes, without risk or danger. By the aid of spectacles, worn during study,

the tendency to fatigue of the eyes ceases as by enchantment. I have known persons affected with kopiopia who, after employing such spectacles, could read, write, or sew for ten consecutive hours without inconvenience. Usually, however, this is not the case; after three or four hours, fatigue commences.

An important rule should always be observed in the selection of glasses, which consists in rejecting any glass which sensibly magnifies objects; this circumstance alone indicates that the glass is too powerful, and that glasses of less convexity should be chosen.

The cure of kopiopia by means of convex glasses is not only instantaneous to some extent, but also durable. We possess numerous observations in support of the preceding assertions, but have not space to relate them in detail; we hope that what we have said will induce practitioners to investigate this field which has been hitherto so uncultivated.—*L' Union Médicale*, No. 46.

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25. *Of the Obliteration of the Lacrymal Sac.* By M. MAGNE.

When I published four years since the result of my researches upon fistula lacrymalis, it was generally admitted by practitioners that this affection was not permanently cured by the divers methods then employed.

Catheterism, which is rarely practicable, often painful, always insufficient, has been condemned by Rosas, Jæger, Sanson, and others. Injections require to be continued for months before any result is obtained, and the false passages and destruction of the mucous membrane lining the ducts, caused by this method, are far from ameliorating the condition of patients. The dilatation of the nasal duct, by means of the style, the seton, or the cat-gut bougie, is a prolonged and painful mode of treatment, which does not prevent relapses. The canula has been much employed in consequence of the advice of Dupuytren; it frequently causes caries, or becomes incrusted or oxidized.

It occurred to me, as the cure of fistula lacrymalis was still an unsolved problem, to revive the plan of obliterating the lacrymal sac proposed a century ago by Nannoni. There was great opposition to this method. MM. Velpeau, Desmarres, Vidal, (de Cassis,) and Sédillot, pronounced a last resource. Nevertheless, discouraged by my want of success with other procedures, I determined to employ cauterization of the sac. I practiced my first operation in 1848. After two unsuccessful efforts, due to the insufficiency of the caustic employed, I used the terchloride of antimony to obliterate the sac, and the twenty-fourth day after the operation the cure was complete. The lacrymal tumour had existed for thirty years.

I have operated frequently since, and invariably with success, except in a single case complicated with caries. The following is the procedure which I employ:

I incise the sac with a double edged knife, or if a fistula exist, I enlarge the opening; I separate the lips of the wound with an instru-

ment which answers for a dilator; I clean and empty the sac, and then freely cauterize it, particularly at the orifices of the ducts. A simple dressing is applied. The operation does not last more than two minutes; it can be performed with great facility, and without the assistance of an aid.—*Gazette des Hôpitaux.*

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26. *The application of Ice in Inflammations of the Eye.* By M. CHASSAIGNAC.

There is perhaps no organ upon which the application of ice has an influence comparable to that which it exerts upon the visual apparatus. For more than four years, at the hospital St. Antoine, the treatment of acute ophthalmia, and of the inflammation which succeeds operations for cataract by depression or extraction, has consisted almost exclusively in the employment of ice and douches of cold water to the eye. The anatomical and physiological characters of the eye explain the good effects of refrigerant applications. It is sufficient here to repeat that in partial or general inflammations of the visual organ, as well as after operations, the inflammatory consequences of which are to be feared, that the effects of the application of ice are proved, and cannot be too highly praised.—(*Revue Médicale*, p. 376.) [We mentioned in a recent number of this journal the communication of M. Magne to the French Society of Practical Medicine, upon the application of ice to the eye after the operation for cataract. Since that time a good deal of discussion has taken place and still continues, not upon the merits of the practice, for that was admitted, but upon the question to whom priority in the application properly belonged. We leave the savants of the society to settle this among themselves, content to publish the manner of applying the ice, which we have gleaned from this discussion. It consists in enveloping, in gold-beaters' skin, a piece of ice large enough to rest upon the bony circumference of the orbit without resting upon the eye, which is to be renewed as often as it melts down. Objection is made to the use of bladder, as it swells up, and, having an unpleasant odour, becomes offensive from its proximity to the nostrils.]

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27. *Colour-Blindness.* By DR. WILSON.

Dr. Wilson, of Edinburgh, in a paper in the Athenæum, refers to this subject as having an important bearing on the system of railway signalling by colours, especially by red and green danger signals. This affection ("Daltonism," *Chromato pseudopsis, Achromatopsia*, etc.) Dr. Wilson considers in three important practical relations: 1. That the affection is much more prevalent than is generally imagined. 2. That red and green, the colours used for danger-signals on our railways, are exactly those which are most frequently confounded with each other by the subjects of colour-blindness. 3. That colour-blindness implies not merely a confusion in distinguishing between

two or more colours, but, at least in many cases, an imperfect appreciation or feeble hold of colour altogether as a quality of bodies. Prevost says that colour-blindness occurs in one male among twenty. Seebeck (in Poggendorff Annalen, xliii. 177) found five cases among forty youths, in Berlin. Professor Kelland, of the University of Edinburgh, has this session found three examples among 150 students. In four of the cases which had come under Dr. Wilson's notice, none of them could be trusted to distinguish a red signal from a green one; and there was not only false vision of colours, but, in many instances, total colour-blindness—so that the subjects of it doubted as to all colours, and would not swear in a court of justice as to any colour. These facts, in connexion with the continually augmenting number of railway accidents occurring, must show the imperative necessity of strict examination being instituted as to the perfect vision of all railway servants.—*Medical Times and Gazette.*

LEGAL MEDICINE AND TOXICOLOGY.

28. *Three cases of poisoning by the Extract of Belladonna.* By M. Mourtard Martin.

On the fifth day of January I was hastily summoned to visit several persons who had been suddenly and simultaneously taken sick. I was absent and did not see my patients until five hours afterwards. When I arrived I found three servants, a cook, a nurse, and a chamber-maid, each of whom presented the following phenomena:

The countenance was pale, the eyes wide open, the pupil largely dilated, dimness of vision, headache, dryness of the fauces, thirst, great loquacity with defective articulation, and complete absence of fever.

I learned that these three women had been simultaneously attacked, five and a half hours previously, with vertigo, spectral illusions, insupportable burning in the throat and vomiting. The symptoms had occurred in the same order in each case.

A physician of the neighborhood had declared that this was a nervous affection, and that one of the women having been taken sick, the others exhibited the same symptoms from the force of imitation. This was his explanation of the simultaneous origin and close resemblance in the three attacks. He asserted that it was necessary to appeal to the imagination, by making the patients believe that they were treated energetically, and he prescribed foot baths and an infusion of orange leaves.

I found that the mistress of the house had lately employed frictions of belladonna in an attack of uterine neuralgia, and that a saucer containing the extract had been left in her dressing room. Her maid had taken this saucer to the kitchen to wash it, but neglecting to do so immediately, the cook had seen it, and, mistaking it for caramel, she had

used it in seasoning shrimps. The servants had all partaken of this dish, and were all poisoned.

When I saw the patients they had vomited, and all of the symptoms had considerably diminished. I thought it needless, therefore, to use any remedies. Had I arrived sooner, I would have administered a decoction of galls and emetics.—*Annales d'Hygiène et de Médecine Légale*, April 1853.

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29. *Dose for administration in cases of Poisoning, in which the Nature of the Poison is unknown.*

After freely evacuating the stomach by emetics, the following formula, proposed by a pharmaceutist of Montpellier, may be prescribed.

℞. Calcined magnesia.
Pulverized charcoal.
Sesqui-oxide of iron. } Equal parts in a sufficient quantity of water.

This preparation is perfectly innocuous, and is very likely to be efficacious, for its ingredients, though simple, are antidotes to the most active and commonest poisons.—*Bulletin de Thérapeutique.*

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30. *Organic Poisons*

M. Flandin has made a good many experiments which go to prove that organic poisons, like the inorganic, are not assimilable; that they act upon the economy by virtue of their presence; and that it is always possible to find them in the organs of victims after death.—(*Journal de Chimie Médicale.*)

STATISTICS.

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31. *Statistics of the Ophthalmic Hospital of Moscow.* By Dr. TRETTENBACHER.

The Eye hospital of Moscow, one of the largest establishments of the kind in the world, was founded in 1826, through the exertions of His Excellency Professor Brosse. The patients (except the serfs of noblemen, who pay three dollars a month,) are treated gratuitously. Dr. Brosse, a pupil of the celebrated Beer, of Vienna, is surgeon-in-chief, a post which he has disinterestedly occupied since the foundation of the hospital, without remuneration.

Since 1826 until January 1853, 143,351 patients have been treated at this hospital. The total expense has been $224,000.

(Dr. Trettenbacher furnishes a valuable summary of the diseases which have been treated during the last eight years, with the results.

We have only space for his numerical notice of the operations for cataract from 1845 to 1853.)

776 operations for cataract were practiced on 702 patients.

From 5 to 10 years, 3; from 10 to 15 years 16; from 15 to 20 years, 26;
" 20 to 30 " 46; " 40 to 50 " 107; " 50 to 60 " 195;
" 60 to 70 " 190; " 70 to 80 " 74.

Character of these Cataracts:

Hard sub-capsular lenticular cataracts,	-	-	114
Soft Intra-capsulo-lenticular "	-	-	245
Lactescent "	(with hard nuclei,)		72
Secondary capsular "	-	-	23
Hard lenticular "	-	-	204
Silicious intra-capsular "	-	-	73
Adherent capsular "	-	-	35

Methods of operating:

Scleroticonyxis, 693; of which 354 were by depression or reclination, and 339 by laceration of the capsule and division of the lens; keratonyxis, 83.

Results of the operations:

563, successful.	126, partially successful.	87, unsuccessful.
276, depression.	38, depression.	40, depression.
334, laceration.	65, laceration.	39, laceration.
53, keratonyxis.	23, keratonyxis.	8, keratonyxis.

No operations are performed in this hospital except in summer. All operations are done by the needle. Extraction has been abandoned, because it is that the effects of the climate, and the frequency of the rheumatic diathesis, preclude the attainment of the fortunate results obtained in countries better situated in this respect.

Causes of failure.

18. Iritis, with its consequences: hypopion, atresia of the pupil;
6. Phlegmon and atrophy of the eye;
28. Arthric ophthalmia (with amaurosis, glaucoma;)
14. Secondary capsular cataracts;
17. Rising of the lens after depression;
4. Lens falling into anterior chamber.

Gazette des Hôpitaux. May 14th.

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32. *Statistics of Insanity in Denmark.* By J. B. Huberz.

The object of this essay is to report what the Danish government has done to throw light on the condition of the insane in that country. The author has followed the plan usually adopted by psychological physicians who have paid attention to statistics. He successively reviews: the number and relative proportions of idiots and lunatics (3,756 persons; 1865 men; 1891 women;) the religion of persons

affected with mental diseases (in 1000, Catholics 334; Jews 585; Calvinists 916;) the age, profession, and duration of the disease, and the age of the patients at the commencement of the disease. In article IX. Dr. Huberz discusses the causes of insanity, and dwells upon the influence of the soil; according to him, the sterility of the soil, or the sparseness of the population resulting from it is a serious cause of mental alienation. Dr. Huberz concludes his long and conscientious essay by an examination of the personal condition of the insane in Denmark, and of the expenses of their maintainance in asylums and hospitals.—*Annales médico-psychologique.*—(*L' Union Médicale.*)

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34. *The Weather in Richmond during the month of May.* By D. TURNER, Esq.

[Being an extract from a meteorological journal kept by Mr. Turner, at his school rooms.]

Month.	Years.	BAROMETER.				THERMOMETER.				Inches of Rain.	Rainy Days.	Cloudiness.	Fogs.	Thunder Showers.	Force of Vapour.	Relative Humidity.	Prevailing Winds.
		Mean.	Maximum.	Minimum.	Range.	Mean.	Maximum.	Minimum.	Range.								
May,	1851,	29.963	30.270	29.549	.721	69.2	93.	44.	49.	2.83	9	3.8	3	4	-	-	sw.
	1852,	29.855	30.314	29.535	.779	67.1	89.2	47.5	41.7	.90	12	3.7	0	4	10.2	62	sw.
	1853,	29.865	30.164	29.564	.600	66.1	90.	45.5	44.5	2.29	11	3.4	1	2	9.8	62	sw.

Heavy Rains: On the 10th, .64 inches; on the 24th, .81.
Prevailing Winds: Southwest.
The fire-fly first appeared at night on the 27th.

NOTE.—In noting the clouds, 0 signifies clear sky; 10 sky entirely covered. The force of vapour is estimated in millimetres. In estimating the relative humidity of the air, 100 signifies saturation.

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33. *Reports of Interments in Richmond, from May 15th to June 14th.* By A. MICHAELS, Esq. Superintendent.

Ages.	Whites.	Coloured.
Adults,	21	22
10 to 20 years,	1	3
Under 10 years,	19	14
Stillborn,	5	2
	46	41

Causes of Death.	Whites.	Coloured.
Pneumonia,	2	3
Consumption,	3	5
Pleuritis,	0	1
Catarrh,	0	1
Asthma,	0	1
Whooping Cough,	1	1
Affection of Brain,	1	0
Paralysis,	0	2
Apoplexy,	1	0
Scrofula,	0	1
Typhoid Fever,	1	0

Stillborn,	7
Unknown cause of death,	21
Various causes mentioned,	59
Total,	87

	Whites.	Coloured.
Dysentery,	2	0
Enteritis,	0	2
Dropsy,	0	1
Affection of Liver,	1	0
" " Heart,	1	1
Diabetes,	1	0
Dentition,	1	0
Cholera Infantum,	4	4
Convulsions,	0	1
Intemperance,	3	2
Old Age,	5	3
Parturition,	0	1
Homicide,	1	1
Total,	28	31

THERAPEUTICAL RECORD.

Epilepsy treated by the Hydrocyanate of Iron.—M. Fabre reports seven cases of confirmed and well-marked epilepsy, in which pills of this substance have operated cures. He alludes also to numerous cases in which it has been successfully employed by M. Roux (of Brignolles,) and adduces the testimony of Dr. Dilasiauve, physician to the Bicêtre, and others, in support of the advantageous effects of this preparation. The hydrocyanate of iron has been successfully employed in chorea and other neuroses complicated with chlorosis since 1829; it seems to exert a powerful influence over the uterine functions, and has succeeded in menstrual disorders after other ferruginous preparations had failed. We must refer those who desire farther information on this subject to the article of M. Fabre.—*Révue de Malgaigne*, (March 1853, p. 139.)

Tannate of Quinia in Nocturnal Sweats.—M. Delioux, Chief of the French Naval Surgeons, after numerous experiments with the different preparations of bark in the treatment of the colliquative sweats which occur during sleep in phthisis and other diseases, considers the tannate of quinia, introduced by Barreswil, the most appropriate remedy in this affection. This agent is supposed to be peculiarly applicable to two essential conditions in this symptom; organic debility, and perodicity. M. Delioux cites many cases in support of his views. He administers this agent in two or three doses of six or eight grains during the afternoon. It is insipid, and causes neither wakefulness nor indigestion.—*L'Union Médicale*, No. 43.

Facial Neuralgia—Daphne Mezereon.—Dr. Wertheim assures us that frictions repeated three or four times a day, *loco dolenti*, with a tincture of the berries of daphne mezereon will certainly relieve this affection. He prepares the tincture in the proportion of twenty-four berries to about an ounce of alcohol.—*Ann. Méd.*

Purulent discharges of the mucous membranes.—Discharges from the mucous membranes are very frequent after eruptive, typhoid or continued fevers of children, and obstinately resist the ordinary modes of treatment. M. Trousseau recommends that these affections should be combatted by lotions and baths containing the sulphuret of potassium (lime of sulphur) in solution.—*Révue Médicale.*

Treatment of Gonorrhœa.—Dr. Henrotay, regimental surgeon at Mons, communicates to the *Archives Belges de Médecine*, the following plan for the cure of chronic gonorrhœa. An infusion is prepared of wild peas (*pois chiches;*) the peas being roasted and ground, and prepared according to the domestic process for making coffee. The infusion is taken with a little milk and sugar, and is by no means disagreeable. It effects a cure in nine or ten days in the majority of cases, even among those which have resisted the treatment by balsams, injections, etc. Dr. Henrotay has also found great benefit from injections of catechu.

Digitaline in Spermatorrhœa. Dr. Lucien Corvisart, a pupil of M. Chomel, reports three cases of obstinate nocturnal, and even diurnal, seminal losses, which were completely cured by the use of digitaline. We refer those who desire to learn the details of the treatment to Dr. Corvisart's paper.—*Bulletin de Thérapeutique.*

Remedy for Drunkenness. Intemperance is the most common vice among the lower classes in Germany. Every year more than 40,000 deaths occur in consequence of excessive drinking. In the Zollverein alone ninety millions of gallons of brandy are annually consumed, and in Hesse half of the grain produced by the soil is used in distillation.

It is known that a fit of drunkenness is relieved by the administration of a glass of water in which twenty or thirty grains, or even a drachm of acetate of ammonia has been dissolved.—*Journal de Chimie Médicale.*

Fissures of Anus. Dr. Giuseppe Peirano has used an application composed of three grains of extract of belladonna and four grains of unguentum rosæ, with great advantage in fissures of the anus, an affection which is often obstinate and very painful. In numerous cases this remedy has not only relieved the pain but induced a cure when various applications had been used in vain.—*Revue Médicale. (From Gaz. Med. Lombarda.)*

Vesico-Vaginal Fistula. M. Maisonneuve, the famous surgeon of the Hospital Cochin at Paris, performed Vidal's operation for the obliteration of the vagina successfully on the 12th of May last. The entire floor of the bladder was destroyed, and a disgusting recto-vaginal fistula existed.

Vesico-Vaginal Fistula. Dr. Chas. Bell Gibson has recently operated successfully in a complicated case of this affection by the method of Dr. Sims, of Alabama,* by which the edges of the fistula are ap-

* See *American Journal of Medical Sciences.* (Vol. xxiii., p. 59.)

proximated by silver wires and clamps. The freshened edges of the wound united perfectly, notwithstanding their thickened and indurated condition, and the metallic sutures were removed on the eighth day. The fistula was very extensive, and had existed for seven years. We were glad to witness this corroboration of Dr. Sims' anticipations in regard to the practicability of his method. We are disposed to believe that it will prove a valuable auxiliary to Jobert's vesico-plasty *par glissement*, which we rank above all other procedures proposed for the relief of this distressing infirmity.—*Ed.*

Prolapsus Uteri. Dr. Desgranges, surgeon-in-chief of the hospital of Lyons, has published his elaborate memoir on the different methods of treating prolapsus uteri, which was read last year before the Society of Biology. He repels the idea that this problem is comparable to the mathematical one of the *quadrature of the circle*, and confidently proposes his plan for shortening the vaginal walls by procuring adhesive inflammation, (*Method par le pincement du vagin.*) The essay of Dr. Desgranges furnishes a complete review of the various plans hitherto adopted for the cure of this distressing displacement, and a detailed description of the procedure which the author has found most useful.—(*See Gazette Médicale; Nos.* 5, 7, *et seq.*)

Furunculus. In the furunculoid epidemic which has lately prevailed so extensively throughout the world, various means are proposed by different medical men; nitro-muriatic acid, alterative doses of mercury, iron, chlorate of potash, yeast and quinine, are among the chief measures recommended. Upon the hands this affection usually assumes the form of paronychia, which we have frequently found to yield to an abortive treatment, consisting in the application of half an ounce of strong mercurial ointment and two drachms of extract of belladonna.—*Ed.*

Stomatitis Ulcerosa. Dr. Mackenzie recommends sponging with the dilute nitric acid of the Pharmacopœia, and giving internally citrate of iron and carbonate of ammonia.—*Med. Chir. Review.*

Syphilis. Dr. Gamberini, of Bologna, reports 116 cases of syphilis treated by the *iodide of sodium*, which he believes may be substituted advantageously for the iodide of potassium, as it does not disturb the digestive apparatus. The dose was ʒj., raised to ʒij. a day.—*Revue de Thérapeutique.*

Syrup of Horse Radish in Jaundice. M. Cornucci publishes (Gaz. de Tosc.) the following formula for a syrup, which he has found useful in the treatment of spasmodic jaundice: Slice six or eight horse radishes and lay them upon sticks arranged across a bowl or deep plate; cover them with finely powdered sugar, and at the end of a few hours a syrupy liquid will be obtained, which the patient is to take in the morning, repeating the remedy for two or three days.

Repertoire de Médecine Pratique.

Home's Liniment for Lumbago. Powdered chamomile, 8 parts; common salt, 2 parts; camphor, (previously dissolved in turpentine,) 1 part; ointment, 100 parts; black soap, 30 parts.—*Med. Facts and Exp.*

EDITORIAL AND MISCELLANEOUS.

Prize Essays.

Many obscure subjects have been elucidated and many laborious investigations have been undertaken in consequence of the practice of offering prizes for the honorable competition of medical men. In proof of this assertion, we need only refer to the masterly treatise of M. Lebert on Scrofula, or the complete and admirable monograph on Pneumonia of M. Grisolle, and the other numerous valuable contributions to science which have been elicited during the last few years, abroad and in this country, by the incentives of generous emulation. The Medical Society of London is annually enriched by some work like Headland's Essay on the Action of Medicines, through the influence of the Fothergillian gold medal; the American Medical Association with its two prizes, instituted, we believe, by the liberality of Dr. G. B. Wood, elicits every year numerous essays of more than ordinary merit. It is with sincere pleasure that we announce that the Virginia Medical Society, anxious to testify its zeal for the advancement of science, offered, at its recent meeting, a gold medal "for the best essay on some medical subject." We trust that there will be many competitors for this reward. Many of our physicians have already borne off prizes abroad; they will contest still more eagerly for honours to be conferred by their brethren of Virginia. The Committee on Prize Essays has lately been appointed by the President, and consists of Dr. Haxall, of Richmond; Professor Cabell, of Charlottesville; and Dr. Bolton, of Richmond.

Hæmostatic Properties of the Perchloride of Iron.

We desire to call the attention of surgeons to the researches of Dr. Pravaz on the best mode of obliterating arteries. We noticed then

experiments in the April number of this journal (see p. 62, *ante*) and coincided with the opinion of Professor Lallemand, that they would be followed by most valuable practical results. M. Pravaz has pursued these experiments for upwards of twenty years at Alfort and at the veterinary school of Lyons. He first suggested the plan of obliterating arteries by galvano-puncture, which was successfully practiced by Pétrequin in 1845 for an aneurism of the temporal artery. Farther researches have induced him to prefer chemical to electrical coagulants, and the perchloride of iron has been demonstrated by numerous experiments upon animals to be better adapted than any other agent to fulfil the ends he has in view. We have elsewhere given the details of the method of injecting the perchloride for the cure of aneurisms. It has been used three times, and in each instance with entire success. We have ourselves tested the hæmostatic powers of this agent. In a case of hæmorrhage from the umbilicus in a child two weeks old, after employing a variety of styptics, we injected the perchloride of iron into the open orifices of the umbilical vessels, by means of a gold pointed Anel's syringe; the hæmorrhage was arrested for a time, but blood soon began to ooze from fissures around the navel, and it was necessary to apply the ligature *en masse*. Hæmorrhage from the stomach and bowels subsequently occurred, and the child died soon after. This was certainly not a fair case for testing the value of this remedy; and yet its temporary efficacy was incontestable. We hope that surgeons will improve every opportunity of satisfying themselves of the value of this new plan of treatment of diseases of the circulatory system.

A Monument to Jenner.

Sometimes since it was proposed that a monument should be erected to the immortal memory of Jenner by the medical profession throughout the world. In glancing over the subscription list we find the names of a large proportion of the illustrious scientific men of every land. Drs. Jackson and Warren have remitted more than a thousand dollars in behalf of the physicians of New England. Drs. Wood and Dunglison have collected a large sum in Philadelphia. The Russian, Swede, French and Italian physicians are vieing in the munificence of their donations. We trust that southern medical men will unite

with equal alacrity in this noble object. We hope that committees will be appointed in the several southern states, and that the profession will unite in honouring the memory of one who was the glory of his profession and of the human race.

MEDICAL NEWS, ITEMS, &c.

A quorum of the Executive Committee of the Virginia Medical Society held a meeting on the 21st of June, Dr. Haskins presiding. Sundry bills were presented and ordered to be paid, and it was resolved that the semi-annual meeting of the society should be held in the town of Charlottesville, in October next.

Professorships.—Dr. Owen Rees has been appointed to the chair of Materia Medica in the University of London, which was left vacant by the death of Dr. Pereira.

At the Faculty of Medicine of Paris, M. Grisolle has succeeded M. Trousseau, who has been promoted to the chair of clinical Medicine at Hotel Dieu, in place of the gifted Chomel, dismissed on account of his refusal to take the oath of allegiance to the Emperor.

Chances of Life in Railway Travelling.—In a paper by Mr. Neison, read at the last meeting of the Statistical Society, it is shown, that during the years 1844 to 1851, 7,044,469,484 miles had been travelled by passengers, and 176 deaths had happened through accidents from all causes,—hence one passenger had been killed for every 40,025,395 miles travelled; and supposing a person to travel 12 hours per diem at the rate of 20 miles an hour, including stoppages, for each of the 365 days in the year, he would be killed by an accident in 456 years.—*Medical Times*.

Mr. Neison has not consulted the newspaper items of the United States in making his deductions.—Ed.

The circular of the committee of publication of the American Medical Association informs us that the price of the next volume of the Transactions will be five dollars. To defray the cost of its publication, at least *fifteen hundred dollars*, in addition to the amount already received by the Treasurer, will be required. It is anticipated that the forthcoming volume will be less a drug in the market than the preceding one, and that the trunkmakers will not pass their fatal compliment upon it. It is to be embellished with coloured lithographs of uterine diseases, probably in that florid style of art with which the Philadelphia reprints of Ricord, Pancoast, Quain, etc., have familiarized the medical public.

The Queen of England has conferred the title of Baron upon Dr. Holland, one of her physicians-extraordinary.

A medical congress, composed of 330 physicians appointed by the practitioners of each province of Belgium, assembled at Brussels on the 20th of March.

The assembly discussed a plan for the organization of the medical profession of that kingdom, and proposed a law to the government, which imposes many salutary regulations upon the exercise of the healing art; this law will be immediately presented to the chamber of deputies; among other provisions, it institutes councils of discipline, and a medical service for the poor, with appropriate remuneration.

An Hospital in Richmond.—The want of sufficient hospital accommodations has long been felt in Richmond, and we recently urged the profession to unite and to petition the legislature to satisfy the public necessities in this respect. In consequence of the general apathy on the subject, a number of our most respectable physicians, Drs. Deane, Marx, Beale, Cabell, Bolton, and Roddey, have determined on establishing a private hospital. A commodious building has been purchased, and the arrangements for the reception of patients are being rapidly perfected.

We understand that Dr. G. A. Wilson, has received the appointment of Professor of Physiology and Medical Jurisprudence in Hampden Sidney Medical College. Dr. Wilson is a Virginian; his views on medical education are liberal, and his abilities are highly esteemed by those who know him intimately. His appointment will doubtless contribute to the prosperity of the institution.

Cholera has made its appearance at Moscow with such virulence, that eight hospitals have been opened for the reception of patients suffering from that malady.

On the 15th February 1853, Dr. Triquet, assisted by M. Masson, a medical student, wishing to remove a tumour from the right cheek of a merchant residing *rue Lafitte*, 48 at Paris, attempted to produce anæsthesia by means of chloroform. The agent promptly caused a mortal asphyxia.

Being arraigned before the tribunals upon the accusation of homicide by imprudence, (notwithstanding the efforts of MM. Nelaton, Trousseau, Velpeau, Mialhe, Valleix, and Gosselin, who testified to the skill of the operator, and the impossibility of foreseeing and preventing the toxic effects of chloroform,) the accused were adjudged guilty, because they operated in an ill-ventilated apartment, and took no precaution against accidents. The tribunal condemned them each to pay a fine of fifty francs.

M. Florent Cunier, a Belgian ophthalmologist, chief editor of the *Annales d'Occuliste*, ophthalmic surgeon to the Duke of Brabant and the Count of Flanders, recently died of pulmonary emphysema, at Brussels. He was only 42 years of age.

Dr. Fred. Robert Manson, physician-accoucheur to the Royal Pimlico Dispensary, was recently called upon to deliver a poor woman suffering from typhus fever. Dr. Manson had at the time a slight wound of the hand; through this wound the poisonous element was absorbed, erysipelas supervened, and death occurred nine days after the accident. The innocent cause of this distressing calamity has herself since died. Dr. Manson, whose untimely end we thus record, was a graduate in honours of the University of London, and a member of the College of Physicians.

Circular—Anæsthesia in Midwifery and Fatal Effects of Anæsthetic Agents — The undersigned was appointed by the American Medical Association to report on the above mentioned subjects at its next session in St. Louis. He therefore respectfully urges his medical brethren to make extensive and close observations on anæsthesia in midwifery and also to analyze carefully all alleged cases of death from the use of anæsthetic agents, and to forward the results to him before the 1st February 1854. The latter cases must be those only occurring within the present year of the Association.

JAMES BOLTON, M. D.
Richmond, Va.

NOTE.—All other regular Medical Journals will please copy.

Vaccination in England.—An Act has passed the British Parliament which renders the practice of vaccination universally obligatory. The parent or guardian of every child born in England or Wales is required to take the said child to the vaccine officer, or some other duly qualified practitioner, and the medical officer or practitioner is required to vaccinate the child and to furnish a certificate that it has been successfully vaccinated. The passage of this Bill was mainly due to the exertions of Lord Lyttelton.

M. Sichel, well known as one of the most distinguished ophthalmologists of Europe, is publishing in twenty parts, each part containing four coloured plates in quarto, a magnificent iconographic work upon the Eye. The execution of those plates which we have seen is perfect. M. Sichel is erecting a monument to the science which he so successfully cultivates, which fully equals the noble work of the lamented Dalrymple.—ED.

The Hospital Hotel-Dieu.—We learn that the demolition of the antique and celebrated Hotel-Dieu of Paris has been determined on by the municipality. But this is not the only change which is contemplated in regard of the Island of la Cite. According to a grand project of the Emperor, all of the buildings on the island are to be pulled down, with the exception of the Palace of Justice, the Prefecture of Police, and Notre-Dame. A vast area will thus be thrown open which will permit the beauties of the cathedral to be admired in beautiful perspective. Hotel-Dieu will be constructed on the left bank of the river. It is said, however, that through the intervention of an honourable professor, this plan may be somewhat modified. Hotel-Dieu may be rebuilt upon a magnificent, monumental scale, upon its present site; its dimensions will be so great that the two cliniques of the Faculty will be transported to it, and the *hopital des cliniques* will be devoted to the library of the Faculty.—*Gazette Medicale.* May 14th.

The municipal council of Turin has ordained that no newly built houses shall be inhabited until two summers have elapsed since their construction. It has also fixed the height at which ceilings shall be pitched. Physicians know too well the diseases to which those are exposed who live in houses before the walls are seasoned, and do not fear, in the popular phrase, *to dry the plaster.*

BIBLIOGRAPHICAL RECORD.

I. *A Treatise on Operative Ophthalmic Surgery.* By H. HAYNES WALTON, Esq., London, 1853, 8vo., pp. 628. John Churchhill. (From A. Morris.)

We feel under deep obligations to the author of the work before us, and the profession will undoubtedly appreciate the service which Mr. Walton has rendered them by his addition to ophthalmological literature. It is a long time since we have read a book on eye surgery so conspicuous for its honesty, its practical bearing, and its perspicuous and unaffected style as this. The author has evidently confidence in his resources, and feels that he can afford to do justice to his rivals. He shows himself to be an observing and able practitioner, and to be intimately acquainted with surgery generally as well as with diseases of the eye. We regret that we are unable to give as much space as we could wish to a consideration of the valuable mass of information contained in this volume, but we will endeavor to give a brief analysis of it, and to point out what is chiefly novel and interesting.

The work is divided into twenty-two chapters, of which the following are the subjects—viz: 1. history; 2. chloroform; 3. instruments; 4. injuries; 5. foreign bodies; 6. affections of eyelids; 7. affections of lachrymal passages; 8. caries of the orbit; 9. nævus; 10. scarification; 11. squint; 12. tumours; 13. protrusion of eyeball; 14. staphyloma; 15. conical cornea; 16. opacities; 17. cataract; 18. entozoa; 19. artificial eyes; 20. malignant affections; 21. artificial pupil; 22. extirpation.

The historical chapter might have been dispensed with, without lessening the value of the book. It presents a series of insulated facts, is disfigured by constant blunders and misprints, and after all, we are told, is only a transcript from Sprengel. The next chapter is more to the point; it contains a succinct account of the introduction of chloroform, and its applications to ophthalmic surgery. Mr. Walton concludes that, "except for the operation for the extraction of cataract, or the division of the cornea to a like or nearly equal extent for any other purpose, there is no operation on the eye, in which well-founded objections exist to the previous use of chloroform or ether as anæsthetic agents." (p. 50.)

After devoting a chapter to a number of sensible remarks on eye instruments in general, Mr. Walton passes to the subject of "injuries from mechanical or chemical agents." Of all applications in burns and scalds of the lids, he prefers nicely-dressed cotton-wool, or, "if the injury is superficial, a covering of gold-beaters' skin or gum, in preference to collodion, which is too painful an application." He thinks it better

not to cut blisters, for the cure goes on more rapidly when the cuticle is not broken.

Our author doubts whether any means, except gentle friction, can hasten the natural process of absorption, in ecchymosis. Poultices of briony root, and Solomon's seal, or infusions of rosemary and arnica, he considers quite useless.

Mr. Walton treats traumatic inflammation of the eye-ball by general and local depletion, but he cautions the practitioner against excessive blood-letting, observing that the destructive consequences of inflammation are not proportioned to the acuteness of the attack, but are frequently seen in a remarkable degree where the inflammatory action is languid. He gives mercury in moderation too, and almost always uses *hydrargyrum cum cretâ*, in doses of two or three grains, "never repeating it more frequently than four times in the twenty-four hours, and rarely so often." He dilates the pupil with a solution of sulphate of atropia, which he prefers to "that filthy application, the extract of belladonna." He evacuates the aqueous humour when the eye feels tense, but condemns the evacuation of pus in the anterior chamber, or in the texture of the cornea. He thinks that the advantage of counter-irritation has been "successfully controverted." We might subscribe to this doctrine as far as the disease under consideration—inflammation of the eyeball—is concerned, but our author goes on to assert that, he "has not been able to satisfy himself of the efficacy of blisters in ophthalmic diseases," (p. 79;) possibly this heterodox sentiment is caused by the fact that "it is the fashion, at present, in this metropolis, to prescribe blisters not larger than half an inch in diameter."

The fifth chapter embraces foreign bodies on the surface of the eye, larvæ of insects under the lids, and ossification of the ocular tissues. An ingenious method of removing particles of iron from the cornea is quoted from Dr. Jeanneret. It consists in the application of a weak solution of the sulphate of copper (gr. iij., ad ℥j.) which removes the iron by its chemical action. It may be occasionally substituted with advantage for mechanical means.

The sixth and seventh chapters treat of the affections of the eyelids and of the diseases of the lacrymal passages. Mr. Walton seems to have devoted particular attention to these affections, and no part of the work is more clearly written, or better deserves a careful perusal, than the chapters treating of these conditions and presenting Mr. Walton's judicious, and, in many cases, novel views in regard to them. Passing over his interesting observations in regard to trichiasis, symblepharon, ptosis and ectropium, we come to the subject of entropium, which has caused so much controversy amongst ophthalmic writers. Mr. Walton discards the idea that this affection depends upon a morbid state of the integument or a diseased curving of the tarsal cartilage, or upon the influence of the palbebral conjunctiva, and attributes all forms of entropium to muscular action. He propounds a treatment in accordance with his views of the causes and pathology of this affection. His operation consists in dissecting away the thickened edge of the orbicularis muscle, and removing at the same time a corresponding

portion of the integument. Mr. Walton considers the tensor tarsi of Horner a part of the orbicularis—that part which has a bony attachment; and he asserts that its correct anatomy has been misunderstood by modern anatomists. He attributes the discovery of this muscle to Duverney, "who wrote and lectured in 1761." Dr. Mackenzie, in reviewing Mr. Walton's book, very properly rebukes this attempt to detract from the merit of our illustrious anatomist.

"He makes Duverney say, 'It is a small muscle which I observed a long time ago. Horner who for a great many years claimed the discovery, which, as I have shown, was made and published before he was born, appears to be ignorant of its exact bearings.' This must be spoken by Duverney's ghost, whom our author has raised for the purpose, for while Horner is at this moment a Professor in the University of Pennsylvania, Duverney was quietly consigned to the tomb in 1730. This shows the danger of claiming the discoveries of other people."

The figure of the tensor tarsi, given by our author, is a complete caricature. Instead of Horner's familiar delineation of a few thin fasciculi terminating near the puncta, it represents two broad bands of muscular fibre sweeping around the inner surface of the tarsi. It is quite evident that the author has modelled the anatomy of the part in accordance with his views of the pathology of entropium.

The three following chapters are devoted to caries of the orbit, nævi and chemosis.

In speaking of acute purulent ophthalmia, Mr. Walton makes one remark, which should be graven on the mind of the practitioner. It expresses a truth which is not yet sufficiently appreciated:

"Incisions are ALL IMPORTANT; for if the eye can be saved, the free division of the conjunctiva will rescue it." (p. 270.)

Chapter eleventh treats of strabismus. We had always supposed that Stromeyer was the first to propose in 1838, and Dieffenbach the first to execute the operation of ocular myotomy, but Mr. Walton informs us that Taylor, an English charlatan, divided the recti muscles for squint in 1737, and that Mr. Anthony White suggested the same operation in 1830. Mr. Walton only perpetuates a national custom in claiming the priority of all operations and surgical improvements for his countrymen.

We had hoped that the unaccountable rage amongst surgeons for dividing muscles had sensibly abated. Some years ago sober people looked on with astonishment, whilst gentlemen ran about town brandishing tenotomes of all shapes and sizes, and poking them into persons eyes, necks and heels, with equal determination and impartiality. Lately, however, this irresistible impulse to tenotomize appeared to have been subdued. In Paris the surgeons jest over their former exploits of this sort. During many months of close attendance at the cliniques of MM. Desmarres and Sichel, we never saw an operation for strabismus performed. We were therefore surprised to find that Mr. Walton observed in regard to this operation:

"It may be said that it is *singularly successful*, equalling in its permanent effects that of any other operation, and surpassing most of those which are practiced for the removal of deformity."

The four succeeding chapters are devoted to the consideration of tumours of the eye and its appendages, protusion of the eyeballs, staphyloma and conical cornea.

The seventeenth chapter, which extends to nearly one hundred pages, is occupied by the consideration of cataract, and the operations for the cure of that most interesting of all the affections of the eye. The subject is treated with ability but without much novelty. Mr. Walton evidently leans to the operation of extraction whenever it is at all practicable; he prefers also the superior section of the cornea; in common, we believe, with the best continental ophthalmic surgeons.

Tyrrell diminished the length of Beer's cataract-knife, allowing its breadth to remain unaltered, "the effect of which was to render it more difficult and more dangerous to use." (Mackenzie.) Our author bent on a still greater improvement, shortens even Tyrrell's knife, and increases the angle at which the cutting edge meets the back, to 27°. In fact the clumsy instrument which he recommends, presents a blade which is almost an isosceles triangle.

In the remaining five chapters of this work the following subjects are treated of:—Entozoa within the eyeball, artificial eyes, malignant affections, artificial pupil, and extirpation of the eyeball.

The chapter on artificial pupil is admirable. Did our limits permit we should be glad to present our author's sound practical views on this subject. In making an artificial pupil Mr. Walton invariably operates through the cornea.

We have not yet spoken of the plates of which there are one hundred and sixty-nine, admirably executed by Mr. Bagg. We think that they are the best wood cuts we have ever seen in a medical work.

Few works, on the whole, better deserve a place in a surgeon's library than this honest and practical treatise. We heartily recommend it to the attention of the profession. O.

II. *Principles of Organic and Physiological Chemistry.* By CARL LOWIG, Ph. D. Professor in the University of Zurich. Translated by DANIEL BREED, M. D. Philadelphia. A. Hart, 1853. 8. vo. pp. 481. (From the publisher.)

That Germany is blessed with many men of profound intellects, is an established fact; in confirmation of which, we have only to point to the magnificent results that have crowned their zealous cultivation of science generally, and especially of organic and physiological chemistry; in investigating which, they have accomplished more perhaps than all the world besides.

The work now before us is the production of the distinguished German Chemist, whose name begins this notice; it contains nearly 500 pages, and though complete in itself, is intended as an introduction to the author's work of 3000 pages on organic chemistry, and which the

translator promises soon to lay before the American public if the present work should meet sufficient encouragement to justify it.

The translator, from his personal acquaintance and intercourse with the author, while in Europe, enjoyed the opportunity of learning from Dr. Lowig himself, his views on chemical subjects, an advantage which enables him to present the ideas in a much clearer light than he otherwise could have done.

We have not had time to make as full an examination of the work as we would have liked, but on glancing through it, it appears to have been prepared with much labor and care, exhibiting, on the author's part, a perfect familiarity with his subject, and in the execution of his task, a thoroughness which marks it as among the first of standard authorities on the beautiful, but in our country, much neglected branch of science, organic chemistry.

Did time and space permit, we would gladly analyse the merits of the work—but at present, we shall have to content ourself with stating that while it is eminently scientific, its phraseology is simple and concise, and the reasoning so clear, that it cannot fail to instruct and interest the student of organic chemistry, who wishes to extend his knowledge of the science beyond the mere smattering which our academies and colleges usually impart. J. L.

III. *Letters on Syphilis.* By P. Ricord. Translated from the French by W. P. Lattimore, M. D. Philadelphia. A. Hart.

We have already expressed our appreciation of this work.* Numerous translations of it have appeared in England and the medical journals of this country. The present one, which first appeared in the pages of the N. Y. Medical Times, is gotten up in excellent style by the Philadelphia publisher. We welcome it as we do everything which tends to diffuse an acquaintance with Ricord's wonderful researches in this department of pathology.

As to the translation, it is literal enough. Indeed Dr. Lattimore evinces too great a propensity to adhere to the wording of the original, and when unable to avail himself of an English synonyme, he usually coins a word or uses a French one, leaving the reader to study out the meaning which he is unable to interpret. We do not speak of *syphilitic accidents* in English, or of *syphilographers*, or *adenopathies*, or syphilis *d'emblée*. "Badly known" is rather inelegant; primary chancre is more correct than "*primitive* chancre." "*Chancrous larvé*" is a poor translation of *chancre larvé*, or concealed urethral chancre. M. Ricord says: "Be facetious, (*soyez leger*) M. Waller, if you please, but be logical;" Dr. Lattimore translates: "Be light, M. Waller," etc. These are trifling errors however, and we advise all who have not access to the original, to make themselves acquainted with the views of the great Specialist through the medium of Dr. Lattimore's translation.

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* See p. 79, *ante*.

IV. *Transactions of the Thirtieth Annual Meeting of the Medical Society of Virginia, to which is prefixed the President's Address.* Richmond. 1853.

The pamphlet which bears the above imposing title consists of nearly thirty-five pages of large type, of which fifteen are devoted to the *Transactions* of the Society, and the remainder to the President's address.

The former portion contains the minutes of the several sessions of the Society (a synopsis of which we published in the May number of this Journal,) eked out with catalogues of physicians who were present at some time during the deliberations, of delegates to the American Medical Association, a majority of whom did not attend its meeting, and of gentlemen who were "all unanimously elected fellows of the Society."

Of the sixteen or eighteen standing committees on scientific subjects, only one reported, and the greater part of this report was drawn up by Mr. Laidley, pharmaceutist.

O Tempora!

We have already discussed most of the important questions which were brought before the society, with the exception of the plan for the establishment of a State medical journal, which, for obvious reasons, we have neither advocated nor condemned.

The President's address commences with a review of the history of the society and a notice of its present condition. We are glad to learn that the efforts of those who have revived the society "have been attended with signal success."

"There is scarcely a county or town in the state in which there does not exist a branch, based on the plan of the parent society, and with the same objects and aims."

The president goes on to advocate a more perfect medical organization still, and, as a means of effecting this, the establishment of a State medical journal. He speaks favourably of the plan of subjecting medical students to a preliminary examination, but thinks that "each private practitioner should compose his own board, and have independence enough to declare to any applicant for study in his office, his belief of his unfitness for such a pursuit." He considers a licentiate board of examiners a less equitable plan, because while this feature is "aimed at the correction of abuses in schools, its manifest operation is indirectly upon them, but directly upon the unfortunate wight who may be deemed unworthy of a license." (p. 5.) On the next page, however, the president speaks more favourably of an examining board.

The author then considers the best means of protecting the public against quackery and imposture, and his remarks on this subject are generally judicious, and contain some excellent suggestions.

We quote a paragraph from the conclusion of this address, and sincerely hope that the humane proposition which it contains will not be overlooked by the profession.

"Some six or seven years ago, I had the honour of presenting to the Medical Society of Virginia a resolution appointing a committee to draft a plan for the creation of a fund for the relief of decayed physicians, their widows and orphans. A committee was raised in consequence, consisting of Drs. Beale, Deane and Carmichael. The draft of a plan was made, which, from some causes not now recollected, was never presented to the society. In a word, the committee did not report. I considered it then, as I do now, a paramount subject for the consideration of the society, and I trust it will be their pleasure at this communication to adopt such measures as may mature the matter."

The present committee on this subject consists of Drs. Beale, Worsham, and Maupin. The efforts of the president in behalf of this cause are highly creditable to him, and we trust that he will receive the warm support of the profession at large in carrying out his project.

V. *Proceedings of the Medical Association of Alabama, at its Sixth Annual Meeting.* Mobile: Dade, Thomson & Co. 1853.

These transactions are contained in a volume of 166 pages, and evince a very commendable spirit of industry in the members of this recently organized association.

Although the majority of the counties of the state were unrepresented at its meeting, and a small minority of physicians lend their aid to the furtherance of its great work, the association has succeeded in publishing a mass of information which is, in some respects, very valuable.

We observe a number of reports upon the diseases and medical topography of different sections of the state, and notices of the indigenous botany of various counties, which are drawn up with apparent accuracy and care.

A report on surgery is presented from the pen of Dr. L. H. Anderson of Sumpterville, who was formerly, we understand, a resident of this city. It consists of a number of letters from different practitioners of Alabama, containing accounts of the operations which they have performed during the past year, together with a history of the interesting cases which have occurred in Dr. Anderson's own practice. We quote from the latter the history of a case of aneurism of the axillary artery in which the subclavian was tied successfully, although the details of it are somewhat meagre.

"D. R. aged 32, of Marion, Miss., was accidentally shot by a revolver through the left axilla, September 15th, 1851. The blood spouted in large jets from the wound, but was at length arrested by compresses and cold applications. Secondary hæmorrhage occurred on the twelfth day. Two months after I learned that soon after the healing of the external wound a pulsating tumour had commenced growing at the seat of injury, and was steadily increasing in size.

"I visited the patient on November 22d and found him reduced by low diet and confinement. His skin was clammy, his countenance anxious, and his respiration short and imperfect, as if from an instinctive dread of bursting the aneurism by a deep inspiration

mour was some two inches in diameter and pulsated strongly with a loud bellows sound."

Dr. Anderson resolved to tie the subclavian artery, and on the following day he made the usual incisions and applied a ligature without the scalini muscles. The patient did well, and after a few hours Dr. Anderson returned.

"My interest in the case induced me to visit him again, three days after. Found him regularly improving, and in a fair way to recover entirely. The extremities of the incision were uniting and the middle portion suppurating favorably. Appetite, digestion and sleep, all good, and warmth and sensibility beginning to return to his arm. I did not see him after this for six months, but heard of him occasionally through Dr. Westbrook. The tumour burst on the 12th day, and discharged grumous blood for several days, but no pus, as is usual. The ligature, though pulled at several times a day, after the first few weeks, did not come away till the one hundred and twelfth day, and then came without the loop. This, however, was spontaneously discharged some days after. The average period of the separation of the ligature, from Dr. Norris's table, is I think, about the twenty-fifth day, and as well as I recollect, he gives no instance in which it was retained longer than the 80th or 85th day.

"I have within a few days, 7th December 1852, heard of Mr. R. through Dr. Kennedy of Lauderdale Springs, (who with Drs. Ford, Westbrook and Wilson of Marion, assisted me in the operation.) He was doing well in every respect, gradually recovering the use of his arm, and in a fair way apparently to regain it perfectly."

We have devoted so much space to Dr. Anderson's report that we are unable to refer to other valuable memoirs and papers contained in these transactions. A paper by Dr. Backus, of Selma, is so obscured by errors, that, according to the author, it is scarcely intelligible. That he may not go down to posterity with the reputation of an incomprehensible author, Dr. Backus has issued a corrected text, in which his views appear less enigmatical. This want of editorial supervision is apparent throughout the book; at least we are disposed to attribute the frequent offences against grammar to typographical rather than original errors.

VI. *A History of Infusorial Animalcules, Living and Fossil.* By ANDREW PRITCHARD, M. R. I. 8vo. pp. 704.

This complete treatise on living and fossil infusoria, is a new and enlarged edition of the well known work of this distinguished naturalist which was published in 1841.

It is based on the classification of Ehrenberg, but the systems proposed by other authors have been added and explained. It is undoubtedly the best work on the subject which is accessible to the American microscopist. The engravings, if we may judge from the delineations of the siliceous shells composing the stratum upon which Richmond is built, are exceedingly accurate.

The work is for sale by Mr. A. Morris.

THE

VIRGINIA

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ART. I.—*Hepatic Sugar, and the Modifications to which it is subjected in Disease.* By Dr. MAX. VERNOIS, Physician to the Hospital of Saint Antoine, &c. [From Archives Générales de Médecine.]

The history of science is full of revolutions. How many theories that seemed to have been forgotten have been revived. How often have we seen some opinion of the ancients, which our predecessors supposed to be annihilated, substantiated by modern discovery!

After the discovery of Aselli, and that of Pecquet, the theory of Galen upon the functions of the liver seemed plunged into oblivion beyond the power of resurrection; yet behold in the nineteenth century a powerful reaction springing up in its favour. Started by Magendie and sustained by Tiedmann, Gmelin and Blondlot, it is consummated by Bernard. This physiologist demonstrates that the liver is the organ of alimentary blood-making; that this organ accomplishes the function of sanguinification by producing sugar and fat, and by reducing to ordinary fibrin the deliquescent fibrin of the porto-splenic blood. The only difference between Galen and the physiologists of the nineteenth century is, that what was a mere speculation of the physician of Pergamus has become an experimental fact for the authors just cited. As an illustration of this, J. Liebig, who has made the boldest

applications of physiology to chemistry, expresses himself in the same terms when speaking of the liver, and seems to have translated the Grecian physician.*

The physiology of the liver then is to be remodelled. In this work I have not embraced so extensive a field; I have examined but one point of the question, the hepatic sugar, the discovery of which, as is well known, is due to M. Bernard. This discovery has been revealed first by a memoir inserted in the *Archives Générales de Médecine*, (November 1848, l. xviii, p. 303,) then in the records and memoirs of the Society of Biology, (Paris, 1849, in 8vo., p. 121.) Dr. Fauconneau-Dufresne has published in the *Union Médicale* (1849, 1850) the lectures of M. Magendie and those of M. Bernard.† In the short analysis which I am going to make of the ideas of this physiologist, I shall profit by the lectures he has given at the College of France this year, (1852.) Hepatic sugar‡ is derived from two causes: 1. Feculent aliment; 2. The liver itself forms it.§

The blood which enters the liver contains no sugar unless the animal has ingested feculent or saccharine substances; while the blood which

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* *Hæ autem* (mesaraicæ venæ) *quemadmodum baiuli in civitatibus repurgatum in promptuario frumentum in aliquam communam civitatis deferunt officinam, concoquendum, et utile ad nutriendum non futurum, etc.* (Galen, *de Usu partium*, p. 135; apud Juntas, 1565; cited by M. Beau.)

The liver may be characterised by saying that it serves as the store-house for substances destined for respiration; that it is the *work-shop* where they receive the form and the characters proper for the production of heat. The liver is small when the lungs are most developed; the more rapidly and perfectly the combustible is consumed, the less the store-house is encumbered. The extent of the store-house then ought to be in definite relation to the quickness of this combustion. (J. Liebig. *Nouvelles lettres sur la chimie.* Freneh translation by M. Ch. Gerhardt, p. 102; Paris, 1852.)

I will mention in relation to this subject the development of the liver in the fœtus and in young children. Large and fatty livers are often observed with phthisical and asthmatic patients, and I have myself met with the fatty liver in cases of acute pneumonia of long duration.

† M. Bernard has himself since (1853) published a distinct and complete account of his discovery, in a work entitled, *Nouvelle Fonction du Foie, consideré comme organe producteur de Matière sucrée chez l'homme et les animaux*, which was noticed in the June number of this Journal.—[Ed.

‡ Sugar is never found in the bile in its normal state. (M. Bernard.)

§ Rollo had already suspected a distinct mechanism for the formation of sugar, from the fact that the quantity eliminated in diabetes was larger than that furnished habitually by vegetables. But he located this mechanism in the stomach. (*Traité du diabète sucré*, p. 38, translated by Alyon; Paris, an. vi.)

departs from it contains it in every case, under every kind of diet, and even during abstinence.

It is not only in the blood of the liver that the sugar exists, the tissue of the gland itself contains a large quantity;* all animals, vertebrated or invertebrated, have sugar in the liver; the quantity being larger the more elevated the rank which the animal occupies in the zoological scale. (In his original memoir, M. Bernard advanced the opinion that the liver of fish did not contain the least trace of sugar.†)

The liver then secretes sugar under what influence? The liver works at this secretion under the order of the lungs. The lungs, excited by the action of the inspired air, react upon the nervous centre, which, reflecting this action, carries it to the liver by the spinal marrow, through the intermediation of the great sympathetic.

Thus excite the origin of the pneumogastric, or excite directly the lungs, and you produce a supersecretion of sugar in the liver, the excess of which passes off in the urine. The anesthetics do not act otherwise, and it is not, as M. Reynoso has said, because they determine phenomena of asphyxia and diminish the power of destruction of sugar, that sugar appears in the urine.

It is thus that diabetes is due to an increased production of sugar in the liver.

If the pneumogastric be cut in such a way that the influence of the air upon the lung is not carried to the nervous centre, animals have no sugar either in the urine or in the liver.

The more an animal respires, the more sugar is produced.

The action of the lungs upon the liver is a reflex action, having all its characteristics. If upon a decapitated animal, the respiration is artificially maintained, there is a production of sugar in the liver; and the same if air mixed with some irritating vapour, (chlorine, &c.,) is made to pass through the lung, sugar passes into the urine as during life; the animal becomes diabetic after death.

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* It is in the midst of the very parenchyma of the liver that the sugar is formed, and not in the blood, for the bloodless liver of animals dead from hemorrhage contains it. (*Traité de chimie anat. et phys. normale et pathologique;* par Ch. Robin et F. Verdeil, t. ii., p. 547; Paris, 1853, [October 1852.])

See farther on, the analysis which I made of two livers of women who died from puerperal metrorrhagia; one of these cases is contrary to the opinion of MM. Bernard et Robin.

† MM. Ch. Robin et F. Verdeil believe still that there is no sugar in the liver of fish. (*Oper. citat,* t. ii., p. 542.)

We can then modify the production of sugar at will; but with respect to its destruction, which is purely a chemical phenomenon taking place in the blood, we can do absolutely nothing.

These are the most important points of M. Bernard's theory. Is it not strange that they have not attracted more attention or created more controversy, instead of passing by as mere experiments verifying the discovery.* My aim has been to establish if possible in what diseases the hepatic sugar persists after death, and in what diseases it disappears. I have wished to test, by the aid of facts, certain propositions of M. Bernard which could not be unconditionally accepted. I have pursued for three years (1849, 1850, 1851) these researches, undertaken without preconceived ideas, without conclusions established *a priori*. May they contribute to enlighten the question!

I have analysed 173 livers, of which two were from the beef; all the rest were human livers. Out of this number 67 contained sugar, 73 contained none, 33 gave a doubtful result.†

The two beef livers, and that of a man who had died instantaneously from a traumatic lesion,‡ contained sugar, a fact which all the experiments of M. Bernard go to establish:

"In the liver of the beef, in that of the healthy adult, sugar of the second species is found."§

I pass now to the consideration of some of the points of M. Bernard's work, which I have marked for especial notice.

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* Beaumert has verified the presence of sugar in the liver; he has extracted three scruples of it with one eighth of alcohol, having 0 89 specific gravity. He found it also in dogs, foxes and cats, fed for a long time upon meat. Lehman has also tested the presence of sugar in the blood of the sub-hepatic veins of the horse, but not in the portal vein, except once, when he found slight traces. He concludes that his experiments confirm the researches of M. Bernard upon the formation of sugar in the liver. (Ch. Robin et F. Verdeil, *oper. citat*, t. ii., p. 572 et 573.)

† I shall explain farther on why I have established a category of doubtful cases.

‡ This man, run over by a wagon and killed instantly, was in a condition entirely physiologic, in the conditions of a vivisection, which is not the fact with many cases of sudden death. From an experiment made upon a convict, by means of a graduated liquor, the liver of an adult, fasting, would contain 23 grammes, 267 milligrammes of sugar; the liver of a beef contains 3 gr. 25 for 100, (Bernard.)

§ In a report read to the Academy of Sciences the 7th of December 1852, M. Bussy advances the opinion that in its normal state the cephalo-rachidian liquid contains sugar. (*l'Union Médicale*, t. vi., No. 148, 11 Décembre 1852.)

M. Magendie has seen it in the blood.

Influence of Age and Sex.

1. *Influence of Age.*—First, is there any sugar in the liver of the fœtus? The theory which I have exposed will explain the importance of this question. "Before birth, says M. Bernard, sugar may be discovered in the liver towards the fifth month; it is rarely met with before this time; and after the fifth month it continues to increase.* There is more sugar in the liver of adults than of young persons."

Such are the conclusions of M. Bernard; let us see if our facts accord with them. In 149 cases I have noted the age. The following table comprises them all.

Influence of Age, 149 *cases.*†

Fœtus of the fourth month of intra-uterine life, 1 case, N.

Fœtus of the fourth month at birth, 5 S.—3 N.—3 D., in all 11.

In 30 cases I had an opportunity of examining comparatively the liver of the mother and the fœtus.

In the first of these cases (cholera) the one and the other contained sugar. In the second (dystocia) neither contained sugar. In the third case (puerperal metrorrhagia) the liver of the fœtus contained sugar, while that of the mother contained none.

From birth up to two years, 4 S.—30 N.—6 D., in all 40.

In one case (premature labour, puerperal metrorrhagia,) I examined comparatively the liver of the mother and that of the fœtus. The child lived nine hours. The mother was tuberculous; her liver was pale and bloodless. Both livers contained sugar.

From 2 *to* 20 *years,* 5 S.—3 N.—3 D., in all 11.

From 20 *to* 30 *years,* 8 S.—8 N.—5 D., in all 21.

From 30 *to* 50 *years,* 23 S.—14 N.—7 D., in all 44.

Of the 23 livers containing sugar in the period of 30 to 50 years, 15 were cases of cholera.

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* There is glucose in the white of the egg; this sugar disappears rapidly. Is there any in the eggs of carniverous birds? (Bernard, *Comptes Rendus de la Société de Biologie,* 1849, p. 61; see also le compte rendu de Berzelius, année 1847.)

The urine of the fœtus normally contains glucose; it is found in the fœtus of the cow from four to seven months, and in that of the sheep from six weeks to two months. At the same time there exists sugar in the liquor of the amnios and alantoin of the cow, of the sheep and of the sow; only it is sometimes wanting in the last weeks of intra-uterine life. (Ch. Robin et F. Verdeil, *oper. citat.,* t. ii., p. 540.)

† The letter S. indicates the livers which contain sugar.

" N. " which contain no sugar.

" D. " which gave a doubtful result.

On the contrary, of the 14 livers containing no sugar, 3 only were from cholera patients.

From 50 to 60 years, 5 S.—3 N.—4 D., in all 12.

It is the same of the 5 livers containing sugar in this period, 3 were from cholera patients; the 4th was a man who died suddenly.

From 60 to 100 years, 5 S.—3 N.—1 D., in all 9.

An analysis of the facts leads to the following conclusions:

1st. Age would seem to have a certain influence upon the secretion of hepatic sugar. The minimum of this secretion would be from birth up to two years; the maximum from 20 to 50 years.

2d. There is sugar in the liver of the fœtus, reckoning from the fourth month of intra-uterine life, but less constantly than in that of adults.

3d. There may be sugar in the liver of the fœtus without there being any in that of the mother, the liver of the mother being healthy and reciprocally. This fact is yet unexplained.

2. *Influence of Sex*, 120 *cases.*

Men, 30 S. (4 in 10)—36 N.—13 D., in all 69.

Women, 28 S. (5 in 10)—13 N.—10 D., in all 51.

Though there is a difference in favour of the female sex, I do not believe it is great enough to warrant any special deductions. *Conclusion.* The sex would seem to be without influence upon the secretion of sugar in the liver.

Influence of Disease.

What are the diseases in which the sugar disappears and is no longer found in the liver after death? This is the point which I have sought above all to elucidate by my experiments, and about which there seems to be no exact notion. If it was admitted that morbid causes could exert any influence upon the secretion of hepatic sugar, it was vague, and only because it was rational. But of the nature of this influence, and whether it varied with the diseases, nothing was known. "It is possible, say MM. Ch. Robin et F. Verdeil, (*oper. citat.*, t. ii., p. 541,) that certain diseases cause the sugar to disappear temporarily from the liver, and thus its existence in the economy is not continuous from its first appearance up to death." Upon this point, M. Bernard is only conjectural: "The secretion of sugar in the liver may be arrested, says he, (*l' Union Médicale*, t. iv., p. 91,) by disease; by an

exacerbation of fever, by pneumonia, prolonged agony, etc." Seeming as if he recognized it himself in the passage which I have chosen for an epigraph, but had not the elements necessary for the solution of the problem.

I think that this problem is important. In fact, who knows if, in engaging in this path so little trodden, a knowledge of the immediate cause of some disease still unknown in its essence may not be arrived at. And, in spite of the progress of modern science, how many diseases are still in this condition. M. Beau perfectly understood this; in his recent work upon the liver, after having considered the theory of diabetes proposed by M. Bernard, he adds: "But this question has not yet been thought of. If, in certain cases, the liver secretes sugar in superabundance so as to give rise to diabetes, it can very well, in other pathological cases, not secrete any at all, or produce a quantity insufficient for the wants of the economy. What is the disease which results from this arrest or from this defectiveness of the saccharine secretion?"

According to M. Reynoso and M. Dechambre, it is not the production, it is the destruction of the sugar which varies. It is thus that they explain the presence of sugar in the urine of animals in which the origin of the pneumogastric has been pricked, in cases of anæsthesia, in strangulation or drowning, (M. Reynoso admits not to have found it constantly in the latter case,) in that of the fœtus, where M. Bernard found it constantly; in the urine of the tuberculous, in patients dying from chronic bronchitis, from asthma, from pleurisy, from hysteria, from epilepsy, in cases of hyposthenic medication; lastly, in the urine of old men, (Dechambre.)*

* Is sugar always found in the urine of the cases which I have just mentioned? M. Contour (thesis, p. 45; Paris, 1844,) has sought it in vain in the urine of phthisical subjects. M. Michea was not able to find it in four cases of hysteria, two of epilepsy and seven of delirium tremens. M. Michea and M. Reynoso (Academy of Sciences, session 31st January 1852,) have reiterated this opinion. They established as a positive fact, based upon a large number of experiments, that the urine of epileptics after the attack contained sugar.

I have not been more successful in some experiments which I made in reference to this subject. In the case of an old man attacked with pneumonia, and who remained two days in a state of asphyxia, I found no sugar in the urine. In the case of a child suffering from croup, upon whom the operation of tracheotomy was performed forty-eight hours after the invasion of the disease, and who died five hours after the operation, the urine taken from the bladder after death presented the following characters: liquid thick, slightly acid, density 1020, containing a little

For my part, I have very rarely met with sugar in the liver of patients suffering from pulmonary affections.

While sugar is constantly found in the liver of healthy animals, I have only found it 56 times in 140 cases in which I noted the nature of the disease;* this gives the proportion of 3.50 lives to 10.

Influence of Diseases in general, 140 *cases.*

56 cases S. (3.86 in 10)—60 N.—24 D., in all 140.

From these statistics we may draw the following conclusions :

Disease has an incontestible influence upon the secretion of hepatic sugar.

It is then being too positive to say with M. Magendie, (*Union Médicale,* t. iii., No. 72): "The sugar of the liver is permanent, only disappearing in some abnormal cases."

The influence of morbid conditions upon the secretion of hepatic sugar, once recognised, ought to be studied and its different elements sought out. How is this to be done? 1st. By considering the duration of disease.

Influence of the duration of Disease, 36 *cases.*

24 *hours and less,* 7 *cases* S. (6.03 in 10)—0 N.—4 D., in all 11.

It must be observed that in this category there is no negative result.

48 *hours and less,* 3 S. (3.7 in 10)—3 N.—2 D., in all 8.

10 *days and less,* 7 S. (6.03 in 10)—2 N.—2 D., in all 11.

Over 10 *days,* 3 S. (3.7 in 10)—1 N.—2 D., in all 6.

The only case in which I found no sugar was a remarkable one. I shall take occasion to recur to it in treating of the influence of abstinence.

Conclusion. Generally the quantity of hepatic sugar is inverse to the duration of disease.

2d. This influence of disease may be due to its nature.

albumen, giving with the solution of potassa and the salt of copper, no reaction characteristic of sugar. In the case of a woman 58 years of age, (quite corpulent,) suffering from considerable pulmonary emphysema, with slight hypertrophy of the heart and partial ascites, the urine collected a few hours before death presented the following characters: urine thick, acid, density 1032. Heat coagulated a little albumen, but neither the potassa or the test of Frommherz detected the presence of sugar. I can then still sustain the opinion of MM. Reynoso and Dechambre.

* Although in most of the cases where the *nature* of the disease was not noted, there was nevertheless disease, I omit this category of facts, in order to obviate all objection.

Influence of the Nature of Disease, 140 *cases.*

1ST CLASS. *Diseases in which the mean of the sugar livers is above the general mean.*

1st. *Epidemic cholera.* 37 cases S. (7 in 10)—5 N.—11 D., in all 53.
2d. *Affections of the heart.* 2 S.—1 N., in all 3.
3d. *Cancer.* 1 S.—1 N.—1 D., in all 3.
4th. *Puerperal Metrorrhagia.* 1 S.*—1 N., in all 2.
5th. *Erysipelas.* 1 S.—1 N., in all 2.
6th. *Croup.* 1 S.
7th. *Rabid Hydrophobia.* 1 S.

2D CLASS. *Diseases in which the mean of the sugar livers is below the general mean.*

1st. *Sclerema.*† 1 S. (0.6 in 10)—15 N., in all 16.
2d. *Inflammatory affections of the respiratory organs.* 4 S. (2.3 in 10)—10 N.—3 D., in all 17.
3d. *Tuberculous affections.*‡ 3 S. (1.8 in 10)—9 N.—4 D., in all 16.
4th. *Different affections of the digestive tube.* 1 S. (1.2 in 10)—5 N.—2 D., in all 8.

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* The patient at the same time had pulmonary tubercles. The liver was healthy, but without blood; the proportion of sugar being very small. I shall allude to this case in treating of the subject of reagents.

† Sclerema, or induration of the areolar tissue, or œdema of new-born infants, is extremely rare in this country, and most of our systematic writers have omitted to mention it. A good description of the disease may be found in Rochoux's article on the subject, in the Dictionary in Thirty Volumes. M. Fabre furnishes in his *Bibliotheque du Médecin-Practicien,* t. vi., p. 540, a summary of the present state of our knowledge on the subject. M. Valleix has studied the whole matter very thoroughly, (Pathologie Interne, t. v., p. 306,) and believes that the affection is confined to adults, while the disease usually denominated sclerema in children is in fact œdema. The œdema of new-born infants as a general rule occurs in foundlings, and comes on from the fourth to the fifteenth day after birth. Its invasion is only announced by a slight discolouration of the skin. The limbs subsequently become reddened and gradually attain the hardness of marble. The affection extends to the trunk. The temperature invariably falls; the respiration is impeded; the pulse is feeble and slow; the eyelids remain closed, in spite of the patient's efforts to open them. The voice is so remarkable that it is always recognized by one who has heard it; it is shrill, feeble, interrupted. As the disease advances a profound coma supervenes, the respiration becomes slower, the circulation feebler, the cry more stifled, the surface is very cold, a sero-sanguinolent discharge occurs from the mouth and nostrils, and death arrives without agitation, or sighs, or convulsions.—[ED.

‡ Nearly all were tuberculous affections of the lungs.

5th. *Purpura hæmorrhagica.* 1 N.
6th. *Cerebral affections.* 4 N.
7th. *Burns.* 1 N.
8th. *Peritonitis.* 2 N.
9th. *Complex affections of the urinary organs.* 1 D.
10th. *Albuminuria.* 1 S. (1.6 in 10)—3 N.—2 D., in all 6.
11th. *Diabetes mellitus.** 1 S.—1 N., in all 2.
12th. *Cancer of the liver and stomach.* 1 S.

Conclusions. The nature of the diseases which causes death has an incontestible influence upon the secretion of hepatic sugar.

In certain diseases the livers which contain sugar are the most numerous, as in epidemic cholera ;† while in other diseases, and it is the largest number, the number of livers which do not contain sugar is much the largest, as in sclerema, cerebral affections, tuberculous affections, etc.

I do not wish to advance premature theories upon these results; I will only remark that the diminution or arrest of the saccharine secretion, in children suffering from sclerema, accords remarkably with the imperfection of respiration and the defective development of the liver observed in this disease, and also that the examination which I made of the liver in cerebral affections establishes the theory of M. Bernard, which places the secretion of sugar by this organ under the immediate dependence of the nervous system.

An analysis of the facts has likewise taught, that in most cases where the liver is anatomically altered, there is no sugar found in this organ.

It is necessary here to divide these alterations into two classes: 1st, those in which the tissue of the gland is completely and uniformly altered, and in which the secretory functions are necessarily destroyed; 2d, those in which the tissue of the gland remains partially healthy

* I shall refer to this fact again.

† Dr. Bouchut, in 1849, having made researches upon the sugar in the livers of cholera subjects, sent me the following note: "Out of twenty livers taken from cholera subjects, the decoction of which being filtered and tested by Bareswell's solution, I found sugar whenever the disease was of long duration, and the cyanic period much prolonged; on the contrary, I did not find it when the cholera was violent and produced rapid death."

Dr. Lucian Corvisart, who has made similar researches, found no sugar in the case of a woman 60 years old who died of cholera in the wards of M. Bouillaud.

These results do not accord with mine, and that is the reason I have inserted them here. New researches alone can elucidate the question.

(which was the fact in the cases of cancer I examined), and where, consequently, the secretory functions persist, though less actively.

I have had many opportunities for assuring myself that putrefaction does not destroy the sugar of the liver, and among others I will cite the case of hydrophobia. I have made a direct experiment upon this point, by submitting to putrefaction (under a temperature of 72°) a part of the liver of a beef, the other part of which I had examined while fresh. Both parts contained the same proportion of sugar.

Dr. Gubler, in a recent work upon syphilitic alterations of the liver in new born children, says that sugar cannot be found in these livers. This is a fact in favour of the last conclusion.

The following table will show the influence that these alterations exert:

Influence of the Anatomical condition of the Liver, 80 *Cases.*

Healthy livers. 23 S. (1 in 2)—11 N.—10 D., in all 44.
Diseased livers. 9 S. (1 in 5)—20 N.—7 D., in all 36.
*Fatty livers.** 3 S.—6 N.—3 D., in all 12.

Influence of Abstinence.

M. Bernard, in arguing that the liver itself forms the sugar, adduces this fact, that the blood going from the liver contains sugar even in cases of abstinence; nevertheless, he admits that a prolonged abstinence may diminish the sugar or cause it to disappear entirely, and lays down the principle that the more abstinence is prolonged, the less sugar the liver will contain.

This point, however, requires new researches for its elucidation, and is the least acceptable among the results announced by M. Bernard. M. Mialhe, in particular (in a note to his *New Researches upon the cause and treatment of diabetes mellitus*, 1849), does not admit that the *formation* of sugar is independent of a saccharine or amylaceous alimentation; he opposes to the conclusions of M. Bernard the following considerations: "If the sugar contained in the animal economy is formed by the liver, and independent of the alimentation, how does it happen that this sugar is precisely the same as that which results from

* Do not these results confirm the theory that the materials of the fat principle of the economy are borrowed in part from the hepatic sugar? It will be perfectly understood then that in case of complete fatty degeneration, the liver would contain no sugar.

the action of acids or of diastase upon starch? If this sugar does not come from the alimentary matter, why does the urine of diabetics cease to be saccharine when the alimentation is uniformly animal?"

M. Mialhe could be replied to by the decisive experiment of M. Bernard, which proves the presence of sugar in the blood beyond the liver, while the blood does not contain any before having traversed this organ; in this respect, then, there is nothing astonishing in the fact that the hepatic sugar is analogous to starch sugar, since the last only can perform a part in the economy.

Whatever the fact may be, to return to the question of abstinence, I examined the liver of a young female 18 years of age, who died from inanition, due to a chronic disorder of the stomach, which lasted a month and a half.* For fifteen days preceding death this patient took no nourishment except broth in the form of injections. Her liver contained a large quantity of sugar.

Theory of Diabetes Mellitus.

The researches of M. Bernard have led him necessarily to propose a new theory for diabetes mellitus. According to him the principle of this affection is an excess of secretion of sugar in the liver. It is observed, in fact, that diabetes is generally accompanied with hypertrophy of the liver.†

Diabetes has been successively called a disease of the stomach, a disease of the kidneys, and is now considered a disease of the liver; and what is most curious, is that many ancient authors, who certainly had no knowledge of hepatic sugar, have located diabetes in the liver. Thus, Actuarius (*Meth. Medendi*, t. 1, cap. 2, p. 31; Parisiis, 1556,) after enumerating many diseases of the liver, adds: "Ad hæc diabetes,

* Stricture of the asophagus caused by poisoning from nitric acid.

† *Theory of M. Bouchardat.* According to M. Bouchardat, diabetes is a disease caused by a pathological modification in the digestion of feculæ.

Theory of M. Mialhe. M. Mialhe considers the digestion of the feculæ exactly the same in the diabetic and the man of health. With both there is a transformation of feculæ into glucose, under the influence of the saliva and pancreatic juice only; with the one the glucose is decomposed in presence of the alkalies contained in the humours of the economy, while with the diabetic, there is a *want of sufficient alkalinity*, and no decomposition. According to him, one of the principal causes of this diminution of alkalinity is the suppression of perspiration, an emunctory destined to eliminate the acids of the economy (see farther on, the case of a *diabetic* who never ceased to have the most abundant sweats).

qui ἐιο οὖρα διαβροια quoque, quasi dicas profluvium per urinas, nuncupatur, quamvis hoc vitium renibus cum jecinore commune sit." Mead, also (*Monita et Præcepta Medica*, p. 92; Londini, 1751): "Nimiam urinæ saporis, odoris et coloris mellei, profusionem, diabeten dictam, non renum esse, ut vulgus medicorum existimat, sed jecinoris morbum, indiciis certissimis jamdudum demonstravi." (*Mech. Account of poisons*, ess. I, ed. 4). Lastly, we come to modern authors. M. Bouchardat has recorded the following phrase: "Diabetes is almost always accompanied with disordered function of the liver." But the explanation which he gives, and which does not appear to me satisfactory, is as follows: "The kidneys and the liver may be considered as the two poles of an energetic pile; on one side producing an acid liquid, and on the other, an alkaline matter. One secretion being modified, the other supplies it, and vice versa." (*Annuaire de thérapeutique*, 1841; *Monographie du diabète sucré*, p. 200).

But all this is very vague. If these authors located the seat of diabetes in the liver, they have not been able to give a reason for it; nor have they succeeded in making others participate in their convictions. On the contrary, M. Bernard founds his theory upon direct experiment, and to prove that he knows the seat of diabetes, he makes diabetics.

Unfortunately there is discrepaney in the facts; thus, in his first memoir (p. 318), M. Bernard says: "With diabetics, it is known that the sugar disappears from the urine in the latter part of life; it also disappears in the liver, for the liver of a diabetic that I had an opportunity of examining under these circumstances did not contain any sugar." In his lectures (*Union Médicale*, t. IV., No. 85), he expresses himself thus: "The same examination having been made upon the liver of a diabetic who died in the wards of M. Rayer, during digestion, and suddenly,* as is not rare in this disease, this organ was found

* The following are the details of the case which died in the service of M. Rayer. The patient died suddenly towards the third day of his entry into the hospital. The urine drawn off by means of the catheter, while the body was still warm, contained a large quantity of sugar. The liver deformed and more voluminous than ordinary, contained a large proportion. The tissue of the kidney, previously washed, yielded sugar, but much less than the liver. There was no sugar in the pancreas, the spleen, or the nervous centres. The blood, from every part which it was examined, contained large quantities of sugar. The intestinal and gastric juices, which are very favourable to the destruction of sugar, did not contain any. (Bernard, *Comptes rendus de la société de biologie*, 1849, p. 80).

to contain nearly two ounces of sugar;* it must be observed, however, that there was great hypertrophy of the gland.

I examined the liver of a diabetic,† and found no traces of sugar; in a second case, of which I shall speak farther on, only slight traces were found.

Do not such facts tend to weaken the theory of diabetes given by M. Bernard? In fact, if diabetes is produced by an excess of secretion of sugar in the liver, we cannot conceive why it is not found after death in the secreting organ, for it ought to be more certainly and more constantly found under these than any other circumstances. How is it that a few days or a few hours before death the nature of a disease can be so modified in this respect, that its principal, its sole anatomical and chemical character shall have disappeared. How, especially in the cases where, after death, sugar is found in considerable quantity in the urine and only slight traces of it in the liver, can we admit that it is an excess of this secretion in the hepatic gland which causes the accumulation of the sugar in the urine? These facts cannot be reconciled with the theory of which we speak; and in this respect there is a new and more difficult question to resolve, to ascertain if the sugar (like other principles of the economy) does not undergo an aponeurotic transformation. Nevertheless, this is not proved by the facts. If, in a single instance, M. Bernard has found an extraordinary quantity of sugar in the liver of a diabetic, it must be remarked that the patient in question died in full digestion, which circumstance takes much value from the fact.

I know very well that, with diabetics, the sugar disappears very often also from the urine in the latter days of life, for I have noted this circumstance in an observation upon my diabetic; but that does not explain wherefore and how the sugar disappears suddenly from an organ which is the supposed seat of saccharine super-secretion; it is one problem added to another, and nothing more.

In awaiting further researches, I am authorized, by my own experience and that of M. Bernard himself, to conclude, that the liver of diabetics (after death) may contain no sugar.

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* It will be recollected that, in a healthy liver, (that of a convict during fasting,) M. Bernard found between six and seven drachms of sugar.

† Entered the Hospital Saint Antoine the 1st of August 1850, died the 16th of September. The urine, examined the 14th, gave no traces of sugar; neither did the liver contain any.

M. Magendie (*Union Médicale*, t. iii, No. 79), allies pulmonary phthisis with diabetes, in respect to the hepatic secretion. The family tie which connects these two diseases has often been noticed; and it is this fact which gives plausibility to the title of *phthisurée sucrée* proposed by Nicolas and Gueudeville for diabetes. Rollo has also said (*Traité du diabéte sucré*, p. 83, trad. par Alyon; Paris, an. VI.): "The nature of phthisis and its action upon the system seems to approach that of diabetes."

"There are but two diseases known up to the present, says M. Magendie, in which an increase of the production of sugar is observed: glucosuria, and pulmonary phthisis. In effect, with most diabetics, the lung is subjected to forced labour to destroy the excess of sugar secreted by the liver."*

It is very true that most diabetics succumb to complications on the part of the lungs; I have seen, myself, two diabetics fall victims to acute double pneumonia, in one of whom there were pulmonary tubercles. How can this be explained, if it is admitted with M. Bernard that the liver only secretes by the demand of the lungs; how can it be explained that the latter organs cause more sugar to be made than they can destroy? In coming more closely to the facts, it will be seen, by consulting my statistics, that the livers of consumptives very rarely contain sugar (1. 8 in 10). How is it to be explained that least sugar is always found in the liver, when, according to the theory of M. Bernard, it secretes most?

M. Bernard has never found hepatic sugar in other organs; but he must certainly make an exception in favour of diabetes,† since he found

* I attended in this city two patients, the mother, aged 70 years, and the son, 48, both of whom had diabetes. Did hereditary predisposition play the same part here as in phthisis? New observations alone can confirm this curious fact.

† It is known that sugar has been found in all parts of the body in cases of diabetes; in the blood, in the pulmonary expectoration (Rollo, M. Bernard; *according to the latter experimenter, the saliva does not contain any*); in the pericardial serum, in the gastric juice (MacGregor), in the semen of a dog rendered artificially diabetic (Bernard), in the serum of blisters (Wurtz), in the sweat (Autenrieth, Landerer); there is none in the central nervous system, nor in the pancreas, nor in the spleen (M. Bernard). For the details, see the work of Robin et Verdeil, t. ii, p. 561, et suiv.

Nevertheless many of these points are still in dispute, which has caused me to practice some experiments of which the following is the result: 1st. *Saliva and bronchial mucus.* One circumstance will explain according to M. Bernard, the uncertainty of chemists upon the fact of the presence of sugar in the saliva; it is be-

it himself in the kidney, previously washed, of M. Rayer's patient. For my part, I have looked for sugar in the pancreas, the spleen, etc., in patients dying from other diseases than glucosuria, and the result has always been negative.

The following is the result of an analysis of the different organs of a diabetic who died in my service, in the Hôpital Saint Antoine, the third of last December.

1st. *Urine taken from the bladder.* I filtered it, but the quantity was too small to test the density by means of the urinometer; ammoniacal odour, slightly yellow colour. Heated with the solution of potassa, the colour changed to a yellow brown; heated with the reagent of Frommherz, the coloration which indicates the reduction appeared before ebullition; the reduction was prompt and complete.

2nd. *Blood of the liver.* I heated this in a porcelain capsule with some sulphate of soda in order to obtain a separation of the colouring

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cause the pulmonary expectoration (in diabetes) is saccharine and the saliva is not. For my part, I did not succeed in finding sugar either in the saliva or the bronchial mucus of a diabetic woman, submitted to my examination.

2nd. *Sweat.* I have examined at different intervals the sweat of a diabetic woman: 1st (5th of February 1852), by laying a strip of perfectly clean linen in contact with the skin and allowing it to become saturated with the sweat. This linen impregnated with sweat and triturated in a mortar with perfectly pure water, gave us a liquid presenting the following characters: density, 1002; tested with potash, slight yellow coloration; with the reagent of M. Frommherz, nothing. I made a comparison with the liquid coming from a piece of the same linen not impregnated with the sweat: density 1001; no result from the two reagents. I repeated this same experiment a second time without obtaining any more positive result.

2nd. (31st March). In a second experiment, after a vapor bath, the patient had such abundant sweats that a sufficient quantity could be collected with a spoon. It was a turbid greyish liquid, in which floated epithelial scales. Heated with potassa, it gave the characteristic coloration of the presence of sugar; and gave the reaction with the test of Frommherz. I examined the sweat frequently collected by the same means, and with the same results; but the linen impregnated with sweat and examined comparatively did not give the characteristic reaction of sugar but once, and then the washing of the linen had been omitted.

3d. (12th of April.) Repeated the same experiment: sweat collected in a glass; density 1008, slightly acid; with the potassa, coloration of burnt sugar; with the reagent of Frommherz, (3 drops) reduction of the salt of copper.

There is then sugar in the sweat of diabetics.

I have examined in many cases (but by the process with the linen) the sweat of phthisical patients without ever finding sugar.

M. Poirson, pharmaceutical Interne at la Salpètriére, has found sugar in the sweat of cholera patients.

matter, consequently the filtered liquid was colourless. Heated with potassa, coloration slightly yellow; heated with the reagent of Frommherz, reduction slow and difficult. Concentrated to a fourth of its original volume, the liquid reduced more promptly the salt of copper.

3d. *Liver.* The liver was red and appeared healthy; I had about six ounces at my disposition, which I boiled for ten minutes with about six ounces of distilled water; the liquid obtained presented a distinct yellow colour, without opalescence. Heated with potassa, colour darkened very slightly; heated with the reagent of Frommherz, reduction, but slow.

4th. *Cerebellum.* About four ounces; (half distilled water) ebullition for ten minutes; liquid limpid, almost colourless, and perfectly so in the test tube. Heated with potassa, yellow colour very evident and sufficiently pronounced; heated with the reagent of Frommherz, discoloration, but the precipitation of the salt of copper was not well marked.

5th. *Kidneys.* About three ounces of distilled water. By an accidental circumstance the ebullition of the right kidney was not as long as that of the left, (ten minutes for the latter.) Left kidney, citron yellow liquid, no opalescence. Heated with potassa, coloration very evident and marked; discoloration and commencement of the reduction of the salt of copper. Right kidney, clear yellow liquid. Heated with potassa, distinct yellow coloration; slow discoloration and reduction of the salt of copper.

6th. *Pancreas.* About three ounces of distilled water; ebullition for five minutes, liquid almost colourless. Heated with potassa, evident yellow colouration; discoloration with the reagent of Frommherz, but reduction not complete.

7th. *Spleen.* About three ounces of distilled water; ebullition for ten minutes, deep yellow liquid; nothing appreciable by the reagents.

Summary. Sugar in all the organs except the spleen. The organ which seemed to contain least was the *liver;* the kidney contained most, but it was not previously washed.

Researches upon sugar in the liver. I have reserved purposely up to this moment, to say how I have proceeded in searching out the hepatic sugar.*

* For the extraction and the reagents of sugar, see the treatise of Robin and Verdeil, t. ii, p. 557.

Hepatic sugar is a sugar of the second species; but, as remark MM. elouze et Frémy (*Chimie org.*, p. 145; 1852), as it has never een obtained in a state of purity, we are ignorant whether it is iden-ical with diabetic sugar or whether it ought to be referred to another variety. In seeking for it in the liver, I have acted pretty much as M. Bernard; thus I took, at the autopsy, a portion of the liver from the same point and always of the same weight; after cutting it up and bruising it in a mortar, I heated it and maintained it at the point of ebullition for ten minutes, in a porcelain vessel, adding always the same amount of distilled water, (four ounces); I then filtered the boiling decoction through a paper filter, previously washed, into a graduated glass, so as to know the exact quantity of the liquid. In a large number of cases I concentrated the decoction and discoloured it by means of animal charcoal.

I have taken occasion to indicate, in the table of experiments, those conditions which have not been observed in a given case. I have, as scrupulously as possible, always followed the same procedure in order to obtain comparable results. I have noted the cases when the decoction was opalescent (circumstance already indicated by Bernard), and found that the opaline tint is not without importance; in 96 cases:

Opaline tint of the decoction. 15 S. (7 in 10).—2 N.—4 D., in all, 21.

Decoction without opaline tint. 28 S. (3, 7 in 10).—34 N.—13 D., in all, 75.

Conclusion. The opaline tint of the decoction seems to correspond with the presence of the sugar.

I have always used two reagents, prepared by myself with the greatest care, the solution of potassa, and the reagent of Frommherz.*

* Potassa detects 1·6154 of sugar; quicklime does the same, but is less reliable: ammonia evaporates too rapidly to give satisfactory results (Cahen, *Note upon the proper means for recognising sugar in diabetic urine; Archives gén. de méd.*, vol. suppl., 1846, p. 41). I prepared the reagent of Frommherz as indicated by Bouchardat (Supplément *à l' Ann. de thérap.*, p. 320.) A liquid containing 1·100,000 part of grape sugar gives, by ebullition, with the reagent of Frommherz, a sensible precipitate; when it contains 1·100,000, a distinct reddish colour may be perceived by reflected light (F. Hœfer, *Dictionaire de chimie et de physique*, p. 380; Paris, 1846). I have, in one case, observed this reddish colour. In the same case, the potassa gave a slight yellowish colour.

Owen Rees notices as a source of error, in the examination of presumed diabetic urine, the conservation of potassa in solution in phials made of white glass containing lead. In this case if the liquid examined is albuminous, the lead contained in

I have often tried the lime water of M. Bouchardat and the reagent of M. Maumené, of Rheims, without satisfactory results. MM. Michéa and Reynoso propose, for testing sugar in the urine, to treat it first with the acetate of lead, then with the carbonate of soda, then to concentrate and test it by Bareswill's liquor. Not having faith in the solution of potassa alone, (the opinion of all who have made similar researches,) they prefer fermentation to using Bareswill's liquor. In the latter choice there is a contradiction to their opinion upon the solution of potassa. As to the saccharimeter, they deny its sensibility, but it must be because they have not used it often enough, or have not employed a perfect instrument. Whenever the potassa and the reagent of Frommherz give a positive result, I am satisfied of having to do with sugar. For me, doubt disappears before the direct experiment with the apparatus of M. Ed. Becquerel. The deviation to the right of the rays of light proves that the liquid examined contains sugar. I have twice obtained this result; and it suffices for me to confirm the previous tests. I have often had recourse to fermentation, which is a precious means in cases of doubt. I aver that the reagent of Frommherz does not inspire me with entire confidence; it is exquisitely sensitive, but capricious. In all of my experiments my two reagents were qualified the one by the other.

Some chemists have confessed a doubt upon the nature of the substance which M. Bernard and myself regard positively as sugar; they say that the reaction of potassa and the reduction of the salt of copper are not necessarily pathognomonic characters. On my part I have comprehended in a distinct category, under the term of *doubtful cases*, those in which the reagent of Frommherz and the potassa gave reactions which did not accord, not being satisfied of the presence or the absence of sugar.

It is a fact worthy of notice that natural hepatic sugar has never been obtained, when in some cases it exists in the liver in such large quantity. I once tried to arrive at this result by boiling a large quantity of liver in distilled water. After successive concentrations, then a treatment by alcohol to separate the albuminous matter, then a slow evaporation, I have only obtained a very opalescent decoction, giving a

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the liquid unites with the sulphur of the albumen and forms a sulphuret. (Extract from the *London Med. Gazette*, 1847; Gaz. méd. de Paris, 1848, p. 359). I am certain that I have not fallen into this error.

yellowish brown colour with potassa, and an immediate and complete reduction with the reagent of Frommherz.

Summary. The following is what may now be said with reference to hepatic sugar.

1st. I believe, with M. Bernard, that sugar exists in the liver constantly and independently of the alimentation. M. Bernard, in invoking in favour of his theory the cases of abstinence in which he has found sugar, admits that prolonged abstinence diminishes the amount of sugar or causes it to disappear from the liver; I have found sugar in the liver in a case of prolonged abstinence.

2d. The age seems to have a certain influence upon the secretion of hepatic sugar. According to M. Bernard, this secretion progressively increases from the fourth or fifth month of intra-uterine life to birth, and from birth to adult age. By an analysis of the facts, I have found that the maximum of this secretion is in the period between twenty and fifty years; the minimum between birth and two years. I agree with M. Bernard upon this point, that there is sugar in the liver of the fœtus, but less constantly than in that of the adult. And besides, a fact which I have observed, shows that it may exist in the liver of the fœtus, without there being any in that of the mother, the liver of the latter being healthy, and *vice versa*.

3d. The sex does not seem to have any influence upon the secretion of the liver.

4th. The influence of disease, foreseen by M. Bernard, has been shown by exact analysis in this work. As might be expected, this influence of disease is exhibited in the duration and nature. In respect to this point, I have examined the theory of diabetes proposed by M. Bernard, and find that it requires some modifications imposed by the new facts which have been observed.

5th. I have shown that anatomical alterations of the liver very often cause a loss of function, that is to say, the secretion of sugar.

6th. Lastly, in order to omit nothing, I have established the fact that a certain physical quality, the *opalescence of the decoction of the liver*, seems to indicate the presence of sugar in this organ.

Note.—It may be acceptable to the American reader that we should mentio the composition of the reagents employed by M. Vernois in his experiments, a also briefly recapitulate the tests usually employed in detecting the presence sugar.

The test of M. Frommhertz, so frequently alluded to by the author, cons

in adding to the suspected liquid a fragment of solid caustic potash, and afterwards a small crystal of sulphate of copper. This mixture is heated gently, and if sugar is present the reddish yellow precipitate of the oxide of copper falls. If sugar is absent the precipitate will be black.—(*Annalen der chem. und Pharm.*, t. vii.)

Trommer's test is essentially the same as this, but the reagents are used in solution. The *liquor potassæ* is added last and in excess; if sugar is present the alkali redissolves the hydrated oxide of copper first formed. Dr. Golding Bird considers this the best test for sugar hitherto proposed, if care is taken to use very little of the salt of copper.

M. Bernard prefers the "liqueur de Bareswil," which is thus composed. ℞. Cryst. Carb. Soda, ʒj., ℈j.; Caustic Potash, ʒij., ℈ij.; Bi-tart. Potash, ʒj., ℈ij.; Sulph. Copper, ʒj.; Dist. Water, Oj. Mix. Boil and then filter. Add in the proportion of one-sixth to one-fourth to the liquid to be tested, and boil the mixture in a water bath. (Donaldson.)

Capezzuoli's test also depends upon the reducing action of sugar on salts of copper. A few grains of hydrated oxide of copper are added to the suspected liquid, and the whole is rendered alkaline by potassa. If the fluid contains sugar it will assume a reddish colour, and the deposited suboxide will gradually present a yellow hue.

Mialhe's test, which the English claim for Mr. Moore, of Birmingham, and which Haller also recommended, is a very convenient and excellent process, and our author seems to have employed it constantly. The suspected fluid is boiled with excess of *liquor potassæ*, and if it contain sugar, it acquires a brown or claret colour, in consequence of the conversion of the sugar into melassic or sachulmic acid. It is important that the potassa should contain no lead, as it is likely to do when kept in white glass bottles, since such impurity would produce a dark sulphuret of lead if the liquid contained albumen.

Some extractive matters are darkened by potash, and therefore M. Bouchardat prefers hydrate of lime (milk of lime). This assumes a caramel tint when boiled with an equal quantity of a liquid containing sugar. Two drachms of starch-sugar dissolved in a pint of water gives a good result by this process. M. Bouchardat announced it in 1833. (*Formulaire magistral.*)

Maumene's test. This physician proposes a new test for sugar, depending on its reducing power on the salts of tin.

Pieces of white merino, or other woolen fabric, are soaked in a solution of bichloride of tin, and then dried. Pour a drop of the liquid to be tested upon the merino, and warm this at a fire. If sugar is present a brown or black stain will be developed. This test is exquisitely sensitive, and will discover mere traces of sugar. (*Valleix.*)

Runge recommends that the liquid should be evaporated, and that a few drops of dilute sulphuric acid should be dropped upon the warm residue, which will assume a dark brown or black colour, if it contains sugar. Albumen will produce the same effect.

Many other tests have been proposed, most of which are occasionally employed

in testing diabetic urine. It will be sufficient to mention that of Ross, which consists in digesting cheese in the suspected urine, and then adding acetate of zinc; the caseine converts a portion of the sugar, if it is present, into lactic acid, and a white precipitate occurs; and that of Pettenkofer, which is founded on the production of a violet colour when sulphuric acid and bile are added to a saccharine fluid.

The saccharimeter invented by M. Soleil gives very precise results.

The processes of *evaporation and crystalization* constitute an excellent method when the amount of sugar is considerable, but they require much time; the same is the case with *fermentation*,—a most delicate test, as it detects one part of sugar in a thousand parts of water. Every cubic inch of gas given off nearly corresponds to a grain of sugar.

Sugar may also be detected by its action or polarized light. M. Biot has invented an apparatus for this purpose which furnishes the most prompt, exact, and delicate results. (See *Bird on Urin. Depos.* Eng. ed. p. 58.) Dr. Bushnan has described a much simpler method of availing of the polarizing power of sugar. (See *Coulson on Dis. of Bladder*, p. 71, *4th ed.*)

We have thus noticed most of the methods of ascertaining the presence of sugar; for all practical purposes the test of Frommhertz (*Trommer's test*) and that of Mialhe (*Moore's test*) will be found quite sufficient.—[Ed. of v. m. s. j.

ART. II.—*Aneurism of Posterior Tibial Artery treated by Compression.* By CHAS. BELL GIBSON, M. D, Professor of Surgery in Richmond Medical College.

James Miller, a sea captain, ætat. 43, was admitted into the Infirmary of Richmond Medical College, February 17, 1851. His appearance was that of a person in robust health, with perfectly temperate habits.

Some seven months previous, he was obliged to stand for several hours steering his vessel in a heavy gale, and shortly afterwards noticed a small tumour two and a half inches below the inner and back part of the knee joint of the left side. He paid but little attention to it however, until it became painful and much larger, and interfered with his walking.

The tumour (February 18) which is larger than an ordinary hen's egg, being carefully explored, presents every symptom of aneurism of the posterior tibial artery very near its origin, just below the lower

margin of the popliteus, as it lies on the tibialis posticus muscle. The leg is swollen and somewhat œdematous.

It was determined to treat this case by compression, and accordingly a firm bandage was applied from the toes to lower part of thigh, with a firm compress over the tumour. A tourniquet was applied over the popliteal artery, so firmly as to diminish but not entirely arrest the pulsation in the tumour, and the limb placed on an inclined plane of about thirty degrees. This pressure was continued during the day as long as the patient could bear it, generally three or four hours at a time, and then the tourniquet was shifted to the distal side of the tumour, until the painful effect of the pressure above had passed away, when it was replaced. Occasionally it was applied directly over the tumour. During the night the instrument was always applied above the popliteal artery, but with less firmness.

The diet of Capt. Miller was ordered to be crackers and tea or rice, and on this he continued for more than two months.

The treatment was continued very carefully until 29th April, when it was found that pulsation had ceased in the tumour and that its size had been gradually reduced to that of a small nutmeg.

The tourniquets were now removed, but the bandage was continued and compression kept up directly over the remains of the tumour by means of a layer of sheet lead. The patient was directed to preserve the recumbent posture with the limb elevated as before. His diet was somewhat improved, being now allowed a little soup every day, and potatoes.

On the 1st May he got up without permission and walked across the ward, and continued to do so every day afterwards, at hours when the medical attendants were not there.

On the 8th May he expressed his wish to leave the Infirmary, as he felt well enough to resume his profession. He was urged to remain, but as he would not, his condition was examined for the last time and was considered conclusive of perfect cure. He was advised to continue to wear his bandage and lead compress, and promised to do so.

He left the Infirmary on the 9th, greatly reduced in strength and size by his rigid diet, and with some stiffness in the left knee, the result of its long confinement in one position.

ART. III.—*Report of a Case of Pneumonia which terminated fatally in thirty-one hours; with the Lesions resulting from a previous Attack of Typhoid Fever.* By JOHN P. LITTLE, M. D., Richmond, Va.

I have thought the following observation worthy of being recorded, as illustrating the extraordinary rapidity with which inflammation of the lung may occasionally pass through its several stages, even in a previously healthy subject. In this case the lung was extensively consolidated nine hours after the apparent invasion of the disease.

CASE. B———, a negro slave, working in a factory, had enjoyed good health ever since his recovery from an attack of typhoid fever, which occurred twenty-one months previously. He had been regularly at work until seven o'clock, A. M., of the day of his attack; at this time he was taken with a chill. He had had slight cough for a day or two.

I saw him at five o'clock, P. M. He was then in the second stage of pneumonia; the greater part of the right lung being hepatized. He died at two o'clock the following day.

Autopsy. The right lung was entirely solidified; there was no appearance of pus; the left lung was healthy; the costal pleuræ were not involved in the disease; no tubercles could be detected. The brain, the heart, the stomach and the liver presented no abnormal appearance.

As I had treated this man for typhoid fever, I carefully examined the small intestines. A portion, three feet in length, above the ileo-cæcal valve, the valve itself, and a small portion of the ascending colour, showed evident marks of chronic inflammation. The patches of iliac glands were thickened and enlarged; the mucous membrane surrounding the patches presented a diffused and unnatural redness.

This condition of the intestine must have existed ever since the attack of fever; yet the nutrition of the patient had not been at all interrupted, nor had he been indisposed for a day. The diffused redness may have been owing to the high degree of inflammatory fever under which the patient laboured. These parts became more easily injected with blood because this vascular tissue was less perfect; just as an old scar retains the flush of inflammation longer than surrounding tissues, and if fever arises, becomes easily injected with blood and retains the inflammatory appearance after the cause producing it has ceased. We can well understand that the nutrition of a patient may be impaired

by such a state of chronic congestion remaining; or that in case of any other inflammatory disease arising, an affection of this part of the intestine might be excited and the patient's state become critical for the existence of the sequelæ of the former disease. In this instance there was no time for danger to arise, yet had the disease been dysentery, and use been made of saline cathartics, mischief would have resulted and the case would have become complicated. I believe it would be well not to lose sight of patients who have recovered from typhoid fever, and also to make use of long continued abdominal counter-irritation.

This patient must have had latent pneumonia for some time; it is impossible to believe that nine hours could have been the space of time between perfect health and the second stage of inflammation of the lung. The shortest case Andral mentions lasted four days; Gerhard makes the usual duration of the disease from 14 to 21 days. Latham states that in chronic disease of the heart, accompanied by chronic inflammation of the vasicular tissue, the lung may remain quite pervious for months but crepitating. By the test of auscultation, he has known nearly a whole lung become condensed and solid in the course of a single night, when there has been nothing to give warning of such a catastrophe.

In this case, however, there was no disease of the heart, no chronic inflammation of the lung, no previous chronic disease whatever.

ART. IV.—*Memoir upon some of the Gastro-intestinal Diseases of Early Infancy.* By Dr. RILLIET, Physician-in-chief of the Geneva Hospital. [Gazette Médicale de Paris.]

If authors differ in opinion in regard to the intimate nature of the affection to which some have given the name of softening the stomach (Yaeger), others of cholera infantum (Dewees, Condie), of cholerine (Adrien, Bourgeois), of acute inflammation of the glands of Peyer (Friedleben, Flesch), of choleriform enteritis (Trousseau), they are unanimous in the descriptions which they give of this disease, one of the gravest to which infancy is subject. There is as much concordance

in the various descriptions of the symptoms, as there is discordance in the opinions in regard to the proximate cause of the disease. The facts which I have collected or consulted add to the nosographical unanimity, but they do not affect in the least the anatomical discrepancies. We shall see in studying this question more closely, one acquires the conviction of the truth of the proposition which I have already established in relation to a more advanced period of childhood, viz: that *identical symptomatic appearances do not correspond to invariable anatomical lesions.*

In fact, the different names which authors have given to an affection which is always identical, correspond to the three principal conditions in which the gastro-intestinal tube has been found after death. The name of *softening of the stomach* has been assigned to this disease in those cases in which a gelatiniform softening has been discovered in the great curvature of the stomach, or in those in which it has been suspected that this softening existed. It has been called choleriform enteritis, or inflammation of Peyer's glands, when the gastric mucous membrane was found to be healthy, while that of the intestine was generally or partially inflamed. Finally it has been occasionally denominated cholera infantum, because in a certain number of cases, no lesions, or altogether insignificant lesions, have been detected in the digestive tubes.

If the names differ, the disease itself is none the less characterized by an uniformity of symptoms, and by regularity in its progress. But before presenting a picture of the gravest form to the reader, I should first describe a mild form of the affection, which I have often met with in practice.

1. *Mild Acute or Subacute Catarrhal Enteritis.* This disease is one of those most frequently observed during the first two years of life, in city practice. The causes may be summed up as the age, the process of dentition, bad nourishment, and climate.

The most notable, and often the only symptom, is diarrhœa; vomiting is rare; the abdomen is usually large, resonant, generally insensible upon pressure; the tongue is moist, the appetite is not lost, but it is irregular and capricious. The evacuations occur many times during the day, accompanied or not by colic; they are variable in their nature, frequently yellowish or greenish, mixed with mucus, with fragments of undigested caseine, if the children are still at the breast, or with portions of food, if they are weaned. The little patients have

flaccid muscles, and pale faces, with a dark ring about the eyes; fever is not usually present, unless dentition is difficult, or some other complication supervenes; the children do not ordinarily keep their beds.

In other cases the symptoms are rather more acute; the face is flushed, there is thirst and often colic. The child is very irritable, the pulse is frequent, the skin is rather hot.

Whatever may have been the commencement, the symptoms above indicated, and the diarrhœa in particular, persist at least for eight days, often for a fortnight or even a month. Usually the disease is shorter in proportion as the onset has been sudden and as the symptoms resemble those of the normal enteritis of older children; while in those cases in which the diarrhœa is altogether apyretic and unaccompanied by emaciation and other disagreeable symptoms, the duration is usually longer; and the symptoms are then observed to persist beyond fifteen days, without any great suffering on the part of the child. If the disease is to terminate in recovery, as is generally the case, the stools diminish in number and augment in consistence; they present characters indicative of better digestion; at the same time the appetite revives, the thirst, if it existed, disappears, the pallor of the countenance is supplanted by the rosy hue of health. But it may happen that the mild form may be the precursor of the grave acute form, or of the chronic form; then the series of symptoms which characterize these two varieties appear.

Choleriform Enteritis. This disease prevails in summer or in autumn; it attacks children of less than two years of age, usually those who are delicate, who have hereditary predisposition to disease, or have been subjected to debilitating causes, especially to bad nourishment.

The affection occurs sometimes in the midst of apparent good health, and at other times in children who have suffered for some weeks from derangements of the digestive organs. The latter is much the most frequent mode of attack. During this incipient stage the different signs of the mild form are observed. After a week or two, the scene suddenly changes, and a series of symptoms are displayed indicative of a disease of the greatest danger. Incessant vomiting, accompanied by serous dejections, almost constantly mark the onset; sometimes they are absent; diarrhœa alone exists; the abdomen presents nothing peculiar, it is rarely painful. The thirst is extreme; the tongue is slightly white and moist; the pulse is frequent, but the temperature of the skin is rarely elevated. The countenance is sad, dejected, spir-

itless; the eyes are already sunken. There is either agitation, irritability, and jactitation, or more rarely, prostration and inertness. After a variable duration of these symptoms, occasionally after the lapse of a few hours, more frequently at the end of two to four days, the scene changes. The countenance is greatly altered, the eyes are dull and deeply sunken, the cheek-bones are prominent, the mouth has fallen in. The agitation has been succeeded by inertness, the emaciation is extreme, the child has melted away. The thirst is insatiable, the surface pallid and icy cold, especially at the nose and extremities; the pulse is miserable, the prostration complete, the child offers no symptoms of sensibility, the soft, flaccid, painless abdomen can be grasped like a linen rag. The vomiting and diarrhœa continue. If the disease is to terminate fatally, as is usually the case when the symptoms have attained this degree of severity, the child dies cold and exhausted. The vomiting ceases at last, but the diarrhœa usually persists to the close, as well as the thirst. The respiration is accelerated, and accompanied by a slight stertor. If the disease is to have a favourable issue, the alarming symptoms are dissipated in twenty-four or forty-eight hours. The pulse resumes its firmness, the skin its warmth. The countenance exhibits more vivacity; there is no longer that dull eye and moribund aspect which was so disquieting. The vomiting is arrested, the diarrhœa is moderated, little by little the thirst diminishes; this symptom and the emaciation are the last to disappear.

It is difficult to determine the duration of the disorder in a precise manner. We may nevertheless, as in certain forms of bronchitis and subacute broncho-pneumonia, distinguish three periods: the prodromic, the period of augmentation or danger, and the decline. Thus, as in broncho-pneumonia, the grave affection is often preceded by a mild form corresponding to a tracheo-bronchial catarrh of little importance, which for many days precedes the serious symptoms of suffocative catarrh. Whether the disease has commenced with or without prodromes, the period which may be called the period of danger, is always short, and rarely exceeds at the utmost three days. The period of decline in the fortunate cases is usually protracted; two or three weeks elapse before the child recovers its strength, appetite and colour. In this respect there exists a great difference between children suffering from subacute bronchial and intestinal catarrh. This difference is explained by the abundance of the dejections, and the derangements of the innervation of the great sympathetic in cholera infantum, whilst

in suffocative catarrh the nervous system plays a less important part, there being only a temporary derangement of the hæmatosis, which disappears when the atmospheric and sanguineous circulations are re-established in the lungs.

The German authors have divided the disease into two periods, one of reaction, the other of paralysis. The first includes the restlessness, thirst, loss of appetite, vomiting, diarrhœa, emaciation and fever; the second, the loss of strength, the flaccidity of the abdomen, the coldness, the feebleness of the pulse, etc.

According to Dr. Fischer, the entire duration of the disease is from six to eight days. Camerer asserts that it may terminate fatally in twenty-four hours.

It being frequently difficult to determine when the disease commenced, it is not easy to ascertain its total duration. In the most brief case which I have met with, death took place in three days from the onset. The fatal termination is usually prompt in proportion as the child is young.

By the side of this super-acute form another may be placed which establishes the transition between the acute, mild, choleric and chronic varieties, and which corresponds to the acute or subacute bronchopneumonia. In this form the diarrhœa indicates the onset, and after a more or less protracted prodromic diarrhœa, which does not greatly enfeeble the child, the symptoms which we have enumerated are observed with this difference, that they are more protracted but less violent. The disease instead of terminating promptly in death or recovery, has a long duration. It is not without danger, but it is more amenable to treatment.

The abdomen is swollen, sometimes painful, the diarrhœa is obstinate, the stools fœtid, sometimes serous, sometimes lienteric, and in other cases mucous, streaked with blood; occasionally there is vomiting. The child is very irritable and restless; the pulse is frequent, but the heat of skin is not great. Emaciation soon occurs, but the skin does not become cold or the thirst so unquenchable as in the preceding variety. Eight days or even three weeks elapse without any modification in the symptoms, or else the child alternates from better to worse.

Three events may occur: they may diminish gradually, or they may augment, or they may remain stationary: or, in other words, the disease may terminate in death, or recovery, or the chronic form.

The following cases offer examples of these terminations, while at the same time they complete the description of the disease:

Case I. B——, aged sixteen months, has always been delicate. His mother, who has suffered from chronic rheumatism for many years, nursed him until the age of ten months. Since he was weaned, his food has consisted almost exclusively in toast-water, broths and coffee; he has never taken pure milk. The little patient has lived in a spacious and well-lighted room; he has not suffered from any of the diseases of infancy; dentition was not difficult, he has eight incisors and four molars.

Two months since he passed a round worm, and took a vermifuge syrup for a fortnight without passing any more. A month preceding the present attack he became thin, his appetite was unequal, but there was no vomiting or derangement of the bowels.

On the 23d of May an abundant diarrhœa came on, (five or six stools daily,) and on the 30th the diarrhœa had augmented and vomiting occurred.

I saw him on the 31st. He is lean, puny and pale; the skin is hot. The abdomen is slightly contracted. The child cries when pressure is made on it, but he does the same when other parts of his body are touched. He does not cough, and presents no cerebral symptoms. (Calomel, gr. j.) The vomitings continued; a short time after taking the powder he ejected a number of worms from the mouth. Two other powders of calomel were administered before the following morning, and the child continued to vomit great numbers of worms, and also to pass them in his stools.

From the first of June until the sixth, the day on which he died, the vomiting continued, usually preceded by a cough, which ceased after the expulsion of the worms. He had besides numerous dejections daily, containing a large number of lumbrici. In one attack of vomiting alone he threw up twenty-eight, and altogether he vomited two hundred at least.

On the fifth and sixth, *the thirst was excessive.* Since the onset it has been impossible to give any nourishment. He died begging for drink, his consciousness remaining to the end. He had no convulsions. The fever, which was intense at first, progressively diminished. The day of his death the pulse was unequal. The treatment consisted in the employment of calomel. He took nine grains of it, in grain doses. Each powder induced evacuations and vomiting of worms. Cataplasms of flaxseed meal and bruised garlic were applied to the abdomen. On the fourth, frictions were made with mercurial ointment, and on the fifth, these were omitted, and a potion was given composed of a drachm of the infusion of Corsican moss,* one scruple of subnitrate of bismuth, and half an ounce of syrup.

* Corsican moss is a mixture of marine plants, of which the principal ingredient is *Fucus Helminthocorton*, which has some reputation as an anthelmintic, and is said also to be febrifuge. See *Wood and Bache.* Appendix. P. 1327.—[Ed.

The autopsy was made thirty-four hours after death.

The temperature was not elevated, wind north. The body showed no sign of putrefaction. The abdominal parieties being laid aside, the intestines appeared of their ordinary volume; the peritoneum did not present any lesion; no trace of effusion. Some of the loops of the inferior portion of the small intestine exhibited yellowish white spots; the slightest traction upon this portion of the intestine caused a rupture of its coats, and the opening gave issue to numerous worms analogous to those which had been evacuated during life. These yellowish white spots corresponded to points at which agglomerations of worms were visible through the thin intestine. In the upper six feet of the small intestine, the three tunics were completely softened; they were altogether more than a line and a half in thickness, consequently were much thicker than in the normal state. They could not be touched without being reduced to a transparent gelatinous pulp, exactly like half-softened paste. It was necessary to employ great precaution in order to incise the bowel in these points, the slightest pressure sufficing to insert the enterotome. The lower portion of the small intestine was much firmer.

In the great intestine the same alterations were observed; but it could be removed without rupturing it, the softening having respected the peritoneal coat. But as it had invaded the three other membranes, it could be studied with more facility than in the small intestine, and it presented in addition a characteristic which was not observed in the latter. The greater portion of the internal surface was lined by a dirty white membranous layer, continuous in some places, and in others resembling muguet more than anything else. Beneath this membrane was the transparent gelatinous tissue, which was two lines in thickness. It was impossible to distinguish in this gelatinous mass of mucous membrane, the subjacent cellular tissue and the muscular fibres. A few hours of maceration in alcohol transformed this diffluent gelatinous tissue into a thick, white, pearly membrane. Under the influence of alcohol the bowel became so solid as to be torn with difficulty, but it was impossible to recognize the muscular fibres.

The small and large intestines contained a great quantity of greenish liquid matter, and several hundred ascarides; a number of the latter had entered the dilated ductus choledochus, but none were found in the substance of the liver.

The stomach contained a considerable quantity of liquid and of worms. On the great curvature, towards the cardiac orifice, the mucous membrane and its chorion had disappeared for a space of half an inch or more; the remainder of the stomach preserved its ordinary appearance; but an incision made upon its surface displayed a gelatinous softening, occupying the mucous and sub-mucous tissues. Beneath, the peritoneum and the muscular fibres could be readily seen. *All of the liquids of the digestive canal exhaled a manifest acid odour.* The mesenteric glands were enlarged, unindurated, apparently without tubercles. The liver, small in volume, and also the spleen and kidneys

were healthy. The lungs and heart were normal. There were tubercles no where.

The head was not examined.

Dr. Mayor kindly examined a diseased portion of the large intestine with the microscope. The following is the result of this examination:

1. The white layer, described as resembling muguet, is nothing more than the altered and partially destroyed mucous membrane. By macerating this white layer of the gelatinous layer and floating it in water, the intestinal villosities could be readily seen with a lens; the tesselated epithelium was disarranged, and had lost its ordinary distinctness and regularity. Here and there were white spots which were nothing else than the solitary glands more conspicuous than in the healthy state. Wherever this white layer did not exist, no trace could be found of the elements of the mucous membrane.

2. The gelatinous softening was formed by an infiltration of the cellular membrane by a gelatinous liquid. In placing a portion of it under the microscope the cellular fibres could be seen, and also the vessels which pass through this tissue to enter the mucous membrane. This infiltration exists also, in the cellular structure uniting the muscular and serous tunics, but it here forms a much thinner layer. The gelatinous matter is amorphous, and contains altered globules, probably blood discs.

3. By the microscope the integrity of the serous coat could be verified, and the muscular coat could be seen with its two orders of transverse and longitudinal fibres.

The fasciculi of fibres had their ordinary appearance, only they appeared to separate with greater facility than usual into their primary fibres.

This case presents a very rare instance of gelatiniform softening, making great progress, and occupying nearly the whole of the gastro-intestinal canal. Besides this lesion there evidently existed an alteration of the liquids, as the highly acid odour exhaled by the digestive tube indicated. Was the alteration of the intestine produced by the action of the liquids, or did it take place after death? The first proposition appears to me evident; as to the second, I am strongly inclined to believe that the alteration of the mucous membrane occurred during life. May we not admit that, under the influence of the acid secretions, the mucous membrane became inflamed, and that the inflammation terminated in softening, which left the cellular coat exposed and unprotected from the energetic and solvent action of the deleterious liquid. It was remarkable to observe the preservation of the serous and muscular tunics, and even of the vessels traversing the cellular coat, elements which are less easily affected by the destructive cause than the mucous and cellular tissues.

The prodigious number of ascarides was another fact of interest in this case. It is probable that they were of recent formation. The generation of so large a number of entozoa indicates a profound derangement of nutrition, but the worms were rather the result than the cause of the disease. The question might be whether these agglomerations of worms, comprising a portion of altered intestinal mucus, had not contributed to the extension of the intestinal lesion. I observed, in fact, that the maximum of softening corresponded to the accumulations of worms.

In a symptomatic point of view we should rank this among the subacute cases. The symptoms did not assume the violence and rapidity which is observed in the acute variety (see Case IX). If, as M. Barrier thinks, fever, meteorism, pain and thirst, are indubitable evidences of inflammation, this softening must be regarded as a consequence of a phlegmasia. I am disposed to participate in this opinion in regard to the present case, although I have often observed all the symptoms mentioned by M. Barrier, when no intestinal lesion existed.

The following observation is an example of subacute affection of the intestine, which may be compared with the preceding case although the termination was very different.

Case II. In September, 1849, while acute affections of the bowels were prevailing, chiefly among children, the fatality being great, I was called to see a boy of 20 months, suffering from enteritis. This child was nursed badly and nourished badly. His parents were petty restaurateurs, and the child was eating all day of food which was either indigestible or disproportioned to his powers of digestion; in a word his training is detestable. His present disease commenced rather suddenly on the 30th of September by a profuse diarrhœa. I saw him on the 9th of October. I found an emaciated child, with the wrinkled face of an old person, eyes sunken, abdomen swollen and resonant, the tongue moist and not furred. No typhoid spots. He cried when the abdomen was touched. The diarrhœa was serous; there was a yellow stain in the centre of the napkin, surrounded by a large aqueous areola. Anorexia was complete; there was neither heat or chilliness of the surface. Pulse 116–120. Skin flaccid.

Treatment. I prescribed calomel, at the dose of three grains, for three days, and small doses of the potion of bismuth; subsequently a scruple daily of the extract of logwood. I ordered frictions with calomel ointment (calomel ʒj., lard ℥j.) for which strong mercurial ointment was afterwards substituted. This treatment was not followed by any amelioration. The diarrhœa continued, the abdomen became more

tympanitic and more painful. No food could be tolerated, not even chicken water.

Since the 14th, vomiting had been superadded to the diarrhœa.

When the disease was at its climax, and the child appeared in the greatest danger, I tried another remedy. I substituted a quarter of a grain of nitrate of silver, dissolved in two ounces of water, for the other medicines. This potion was taken during the twenty-four hours, a large spoonful at a time.

On the 19th he had taken six ounces of the solution. I then suspended the remedy.

Its effects have been positive. The vomiting was diminished immediately, and in twenty-four hours it had entirely ceased. Its influence upon the diarrhœa were not less characteristic. In twenty-four hours the liquid evacuations were arrested; there were stools, but they were consistent. The thirst had diminished, the abdomen had become soft, the pulse less frequent (68). The child was prostrated, but there were no cerebral symptoms. Since the 19th he had had exacerbations of fever. He was able to take a little milk on the 18th.

From the 19th to the 26th, the disease continued to ameliorate; occasionally there were loose evacuations, which were checked by a few doses of the solution of nitrate of silver. On the 26th, I found him sitting up in bed, very much emaciated, but without fever; there had been only one or two stools in the preceding twenty-four hours. The convalescence progressed regularly; in a few days the diarrhœa had ceased, the appetite and strength had begun to return. Nevertheless more than a month elapsed before health was completely restored.

There were no sudamina at any period of the disease, nor gurgling in the iliac fossa, nor prominence of the spleen, nor cerebral or pectoral typhoid symptoms. The evacuations, while liquid, were always of a serous character; there was never any trace of blood.

In a therapeutical point of view this case is highly interesting. An energetic treatment had been unsuccessful, when I commenced the administration of the nitrate of silver. The effect of this remedy was as prompt as it was salutary. It appears to me evident, considering the dose at which it was administered, that a topical astringent action upon the intestinal mucous membrane cannot be invoked to explain the cure. I believe rather in a dynamic action upon the nervous system, which is so gravely involved in the intestinal affections of children. Who knows but that the nitrate of silver exerts a powerful influence upon the nervous state. The cure of epilepsy by means of it is a proof of this.

Cerebral Enteritis. By the side of choleriform enteritis, I should place a form of the grave varieties of infantile gastro-intestinal affections, to which I have given the name of ataxic enteritis, and which

corresponds to the similar form of pneumonia in children, and also resembles the typhoid enteritis of older subjects.

This disease has the same predisposing causes as other gastro-intestinal affections, but it is the result, more than any other species, of indigestion and difficult dentition. It offers two varieties, corresponding to the two varieties of frank meningitis. A. *the convulsive variety*, B. *the meningeal variety.*

A. The *convulsive variety* commences by bilious or mucous vomiting, and diarrhœa, with greenish or serous passages, which are sometimes very fœtid; subsequently an attack of eclampsia supervenes, and is frequently repeated at short intervals.

In other cases the eclampsia is the first symptom. The fever is intense, the abdomen tympanitic, the diarrhœa greenish, fœtid, and obstinate. In twenty-four hours the cerebral symptoms disappear, but the diarrhœa, anorexia, and frequency of the pulse continue; the disease may last a week altogether. We do not observe, in this form, the general coldness, the smallness of the pulse, the incessant vomiting, the insatiable thirst, the deep alteration of the features, the sunken eye, the rapid emaciation of the preceding form.

B. *Meningeal form.* In other cases there is a tendency to constipation. The meteorism, the occasional shrill, cries indicate colic; and as nervous symptoms, we observe drowsiness, jactitation, a great susceptibility to sound and light, irregularity of pulse and respiration. At the end of three or four days, under the influence of evacuants, these symptoms disappear; in other cases they persist for a week or fortnight; emaciation occurs, the pulse is rapid, diarrhœa succeeds the constipation. Almost always, when the symptoms are thus protracted, dentition plays an important part. It is to cases of this sort that the name of pseudo-meningitis has been applied.

The proof that these different types of gastro-intestinal affections are only two varieties of the same species, is furnished by the fact of their sometimes alternating in the same subject.

I have the details of an observation, which is too long for insertion here, of a child attacked at the age of three months by cholériform enteritis, (vomiting and profuse diarrhœa, prodigious emaciation in twenty-four hours, imminent danger.) At five months he had convulsive cerebral enteritis, which lasted a week; at seven months a second attack of meningeal cerebral enteritis supervened, and lasted three

weeks. Since that epoch the child has always enjoyed good health. He is now seven years old.

The following cases are examples of the meningeal and eclampsic forms of this disease:

CASE III. In the course of the epidemic of gastro-intestinal affections which prevailed in 1849, I was called to see a very sick child of 22 months. It was a girl whose hereditary, hygienic and constitutional conditions were very unfavorable. Her temperament was lymphatic; she had long suffered from palbebral ophthalmia. Her mother was scrofulous, and her brother tuberculous. Her nourishment was bad.

Eight days before the onset of the disease she had had vomiting and diarrhœa, but had commenced to eat again, and to go out every day.

On the 16th of December frequent vomiting and a constant aqueous diarrhœa came on; these symptoms persisted, and on the 19th she had an attack of eclampsia, which, with its consecutive coma, lasted two hours.

I saw her in the evening. The little child was lying on her back, comatose, yet when I examined her she groaned and complained. There was neither strabismus, nor dilatation of the pupils, nor paralysis. The extremities were cold, but it was not the icy and general coldness of choleriform enteritis. The tongue was moist; the thirst considerable. Pulse 120, respiration unequal.

Treatment. A grain of calomel every five hours. The next morning 12 grains of bismuth in four doses; frictions with balm.

On the 20th the vomiting was arrested; the child had three stools, the last one green. The prostration continued, but the pulse was less frequent. The thirst continued intense.

The amelioration continued, and the same treatment was persevered in until the 24th, when the child was evidently convalescent.

It is worthy of remark that the psoropthalmia disappeared during the acute disease of the bowels, and recurred after the cure.

This case, observed at the same period as the preceding, appears to me to demonstrate in an irrefragable manner that under different symptomatic forms we have still an identical disease, whose physiognomy varies according to conditions which it is not always easy to appreciate.

This case, as regards the gravity of the general and local symptoms, should occupy a middle place between Cases II. and X., and would thus serve as a transition between the choleric and cerebral forms. I have put it in the class of cerebral enteritis in consequence of the intensity of the attack of eclampsia, which gave the disease a peculiar physiognomy.

In the following case, observed two months earlier, the nervous

symptoms were much more characteristic, and the gastro-intestinal affection much less serious :

Case IV. A little girl of 17 months, subject to bronchitis, and belonging to a lymphatic family, was nourished at the breast, and since weaning her diet has been judicious. But six weeks ago her regimen was entirely changed; she ate of all kinds of indigestible food, salads, fruits, meats of all sorts. As a result the child lost her appetite and became irritable.

On the 29th of July she ate a large quantity of a medley of acid fruits. During the night she vomited the rice which she had eaten at seven in the evening. The next morning she appeared as well as usual. At eleven o'clock she was suddenly attacked with general convulsions, which were preceded by a loose fœtid evacuation, and followed by a similar one. I saw the child at half-past twelve; consciousness had returned, but she was irritable and nervous. Pulse 140; skin warm. The abdomen is slightly swollen, and resonant in most parts; the child cries when it is touched. The two evacuations were mucous and aqueous.

I considered the convulsions connected with the state of the alimentary canal, and I prescribed half a grain of calomel every three hours, cataplasms to the abdomen, and if the convulsions recurred, stimulating applications to the extremities. During the day four convulsive attacks occurred and the child did not regain her consciousness in the intervals. She passed three large mucous stools. At ten o'clock the fever was intense, the pulse vibrating, as in children about to have convulsions, at 160. The child was comatose; the cheeks were very red and of burning heat, while the temperature of the head and of the rest of the body was but slightly elevated. The abdomen continued slightly swollen and resonant. I sat near the child, and had watched her for quarter of an hour, when suddenly her arm trembled, then her eyeballs were convulsed, her body moved spasmodically, in a word, she had a well characterized attack of convulsions. Presently foam appeared at her lips, and a slight stertor came on. The convulsions ceased, but they soon recurred with aggravated intensity. They continued nearly twenty minutes. This was the longest and most violent attack which occurred during the day. The fits terminated in several noisy expirations, with hoarse inspirations. The convulsions having finally ceased the child remained in profound coma, grinding her teeth at intervals. During the crisis I applied three leeches to the left mastoid process. They drew well, and the bites bled freely. I had the child placed in a warm bath, in which she was immersed for three quarters of an hour. The spasmodic movements ceased, and she was put to bed. She slept until three in the morning, and when she awoke she had regained her consciousness.

One of my brethren who had seen her at seven in the evening accidentally, believed her attack meningitis, and considered her state most alarming. He lanced the gums over the inferior canine teeth, the only

ones which had not penetrated. This operation did not prevent the development of the violent attack at which I was present.

The 31st, at eight o'clock, I found the child conscious, but rather excited, constantly calling her parents. The abdomen was flat and painless on pressure.

She has only taken a grain and a half of calomel and has had at least eight mucous stools, streaked with green. The intense heat of the preceding evening has disappeared. The pulse is regular, at 108–112, small. Thé thirst is considerable.

Treatment. Half a grain of calomel every hour. A gelatine bath.

From the 1st to the 18th the cure went on. The convulsions did not return, but a mucous, fœtid diarrhœa continued for five or six days. The appetite returned when the diarrhœa passed off.

I saw the child August 1st. She was quite well, but the face was a little swollen.

The child subsequently had three attacks of convulsions, but always in consequence of an acute catarrhal affection of the bowels.

The departing point of this affection was evidently the intestine, but its physiognomy was that of an acute meningitis. If she had had vomiting and constipation in place of the diarrhœa, these attacks of eclampsia, so frequent, so grave, and followed by so disquieting a condition of the brain, would have scarcely left a doubt as to the existence of a phlegmasia of the meninges. This was the opinion of the physician who saw her in the evening, and who, ignorant of the antecedents, gave the diagnosis which appeared most rational.

In the third case the gastro-intestinal symptoms were somewhat analogous to those of choleriform enteritis, in the present they were not so at all. The passages were fœtid and mucous, not serous. There was no vomiting, no tendency to coldness. But though the abdominal symptoms were not serious they were very appreciable. The diarrhœa sufficiently indicated great irritation of the bowels. The causes were plain:

1. Hereditary catarrhal predisposition; the child after recovery had several attacks of bronchial catarrh.

2. Bad diet, which had induced a general cachectic condition, before inducing the local symptoms.

3. The difficulty of dentition, which probably impressed a *cerebral stamp* on the disease.

4. We must not omit the year and the season among the predisposing causes.

In the following case the cerebral variety is still better characterized.

Case. V. A boy of 26 months, large and vigorous, the son of a peasant, like all children in the country, was under the particular care of no one. Hence occur errors in diet, which, as in this case, produce very serious consequences.

This child, the day of the commencement of the disease, July 9th, 1849, had eaten in the fields a great quantity of unripe corn.

In the evening he was taken with incessant vomiting and abundant diarrhœa, with fever and agitation, alternating with drowsiness.

I saw him upon the 20th at mid-day. The features were contracted, the look wild, the eyes sunken, the skin is slightly yellowish. The skin was burning, the pulse at 140. The abdomen was not much distended, the evacuations were greenish. (One grain of calomel, potion of bismuth three hours afterward.)

The potion had not been administered when the child was seized with violent convulsions, which frequently returned, lasting a few minutes, and being succeeded by complete coma. The convulsions ceased at night-fall, but the coma persisted.

The following morning, the 21st, the child was very torpid, and did not answer questions. The skin was much less hot; the pulse was rapid but neither full nor irrregular. The vomiting had ceased. Dr. Bizot, who had been summoned during the convulsions, had applied four leeches behind the ears. In the course of the day consciousness returned.

The 22nd the intellect was natural, but the diarrhœa and feebleness persisted until the 30th, at which date convalescence was fully established.

The cerebral form was perfectly characterized in this case, and the abdominal affection was equally apparent.

Indigestion acted in this subject as an irritant poison; it was a hypersecretion with inflammation of the gastro-intestinal mucous membrane. The obstinacy of the diarrhœa, and the intensity of the febrile reaction are conclusive proofs of a serious irritation of the stomach and bowels instead of a mere indigestion.

The year and the season were the predisposing causes of this grave affection, which was observed at the same date as that of the preceding case.

In the cases already adduced, the aspect of the disease was grave and the eclampsia intense; but numerous cases occur in practice in which cerebral enteritis is manifested by another series of symptoms.

Case VI. The subject was a little girl of four months, belonging to a wealthy family. She was nursed for a month by her mother, who was leucophlegmatic and had little milk; her father was tuberculous. During this month, she had constant diarrhœa, and fragments of undi-

gested caseine appeared in her passages. Since she had been weaned, the child had been fed with a mixture of milk (two thirds) and chicken-broth (one third), and the passages had become nearly healthy.

The 18th December, 1849, a slight febrile movement came on; the child uttered frequent cries, and threw off large quantities of wind; the abdomen was distended; there was constipation; no vomiting, nor muguet. The child was drowsy; there were twitchings of the muscles, and slight spasmodic movements of the eyeballs.

The cries, evidently caused by pain in the bowels, the meteorism, joined to the fever and its antecedents, showed that the seat of the disease was in the bowels, notwithstanding the symptoms which might lead to an apprehension of cerebral disorder. (A bran bath; cataplasm on the abdomen; eight drops of tincture of aconite in syrup of orange flowers.)

The child passed a bad night; the next morning the drowsiness had increased, the spasmodic movements were frequent, the constipation and fever persisted. The respiration was irregular, and there were occasional sighs. The child was sensitive to noise and light. No convulsions, no dilatation of the pupils. (Bran bath, cataplasm, syrup of chicory, ʒj.) This slight laxative operated, and brought away three dark, green stools.

On the morning of the 20th, the pulse and respiration were irregular, and the cerebral symptoms continued.

I still diagnosticated a gastro-intestinal affection with a sympathetic reaction upon the brain; nevertheless the protracted duration of the symptoms gave me some uneasiness, and I directed two powders, each containing half a grain of calomel and half a grain of oxide of zinc.

I found her better at five in the evening; she had vomited milk twice, but she had also passed a yellow evacuation, far more natural than the preceding. She was more lively; she observed objects; the pulse was less irregular. I prescribed another powder of calomel and zinc.

There was great amelioration on the 21st, and on the 22d she was cured.

In this case the cerebral symptoms were well marked, and the abdominal symptoms were also evident; but constipation existed instead of diarrhœa. Had it not been for the absence of vomiting, and the facility with which a slight laxative produced an evacuation, the cerebral symptoms would have been sufficient to have excited fears of meningitis.

Symptoms. I will now examine in detail the symptomatology of the choleric variety. An analysis of the symptoms of the mild and cerebral varieties would offer but little interest; the sketch of the disease and the observations I have appended to it will suffice to give a complete idea of these different types.

Digestive Functions. Vomiting is not a constant, but it is a frequent, symptom. When it exists, it occurs on the first day of the serious symptoms; it is usually preceded by diarrhœa, and always accompanied by it. The vomiting is serous, aqueous, or mucous, hardly ever bilious. The secretion of the bile appears, in fact, to be suppressed; it not only does not regurgitate into the stomach, but it does not flow into the intestine, as is shown by the colour of the dejections. The duration of the vomiting is much more brief than that of the diarrhœa; it is scarcely observed except during the period of danger. Its frequency corresponds with the gravity of the disease.

Diarrhœa. The diarrhœa is a constant symptom. It often precedes the onset, and always accompanies it, and persists until the termination of the disease.

The passages offer various characteristics before the invasion of the disease; they are always liquid, often lienteric, yellowish and greenish, with fragments of undigested caseine. At the onset of the acute symptoms, and in the course of the disease, they are essentially serous. The child's napkin is wet as if by urine, and in the centre of the aqueous areola appears a yellow spot. The passages become greenish, or blackish, or reddish, under the influence of medicine, (calomel, bismuth, logwood.) Their frequency and abundance are constant characteristics; six in the twenty-four hours is the smallest number. There are more commonly twelve or twenty-four.

The *thirst* is one of the most frequent and important symptoms; I know no infantile disease in which the thirst is so truly insatiable as in this. The description Nagel gives of it is not exaggerated: "It is piteous, says that physician, to observe the efforts these children make to reach the glass which contains their drink; when they see it their eyes beam with joy, and they employ the little strength that remains in their feeble arms to approach it to their lips. If they are suffered to do so they clutch the glass and empty it to the last drop." The drink is usually rejected as soon as it is taken. The symptom on which Pommer insists, the protusion of the tongue from the mouth, a symptom which I have not observed, is perhaps due to the thirst.

There is nothing peculiar about the tongue; the mouth is not dry; suckling is not difficult until the approach of death.

State of the Abdomen. There is nothing constant in the condition of the abdomen. At the onset is slightly swollen, usually painless

upon pressure; at a more advanced period it is soft, flaccid, and can be pinched up like a rag.

Circulation. The symptoms furnished by the circulation are of great importance. At the onset the pulse quickens, but the skin is not very warm usually; nevertheless I have occasionally met with intense fever in these cases. Whether fever supervenes or not, in from one to six days a coldness of the extremities comes on, which sometimes extends to the whole surface. At the same time the pulse changes; it becomes thready, or even insensible. The coldness is a very grave symptom; nevertheless it is not always the forerunner of death; it may disappear simultaneously with the improvement in the pulse, (see Case IX.,) but if it persists and augments there is little hope.

Countenance, Nervous System, etc. The alteration of the features is characteristic, rapid and marked; the face is pale, the nose pointed, the cheek-bones saillant, the orbits hollowed, the eye is dull, clouded, wandering; the globe oscillates beneath the half-open lid. The countenance is of great importance in the diagnosis. When the symptoms are alarming it becomes very rapidly altered. We have more than once left our patient without great anxiety, and returned in a few hours and found him irrecognizable.

At the onset the little patients are irritable and anxious, they cry constantly, or else have alternate fits of crying and drowsiness. Towards the last the drowsiness predominates, and the irritability is succeeded by apathy.

Emaciation is one of the most constant and characteristic symptoms. It is especially apparent in the face, but the whole body participates in it. The emaciation increases until death occurs; one may say without exaggeration that the child melts away before our eyes. The emaciation continues during convalescence. One of my patients lost 14 ounces during the seven days of his disease; he lost 13 ounces more during the ten days of convalescence; he then regained an ounce daily.

Respiration. The respiration is unequal and anxious at the beginning, it is accelerated towards the close, and is sometimes accompanied by a slight but very alarming tracheal stertor.

Causes. The causes of the three varieties of enteritis are the same, but I shall insist particularly on those of choleriform enteritis.

This disease is especially frequent during the period of dentition, from four to twenty months. This is the opinion of almost every au-

thor who has written on softening of the stomach; my facts are a new proof of its correctness. My patients were from three weeks to two years of age; but the great majority were from three to sixteen months old. At the *hôpital des enfans malades*, at Paris, where M. Barthez and I collected such a great number of cases of abdominal affections, we scarcely observed a single instance of cholera infantum, because the patients were all from twelve months to fifteen years of age.

Boys, according to my observation, are more subject to the disease than girls.

Authors unanimously acknowledge the powerful influence of bad diet in producing this disease. Scarcely one of my patients followed the rules of good alimentary hygiene. Most of them were fed by the bottle, or had been weaned prematurely, or were furnished with indigestible food.

It is a remark equally common and true, that children subject to this disease are usually puny, delicate and subject to derangements of the bowels.

We must not believe that the children of the poorer classes alone suffer from this disease. We may say of it what Franck said of the small pox:

Parcet nec divitis nec pauperibus.

Amongst my patients, two-thirds belonged to the upper and middle classes of society; the remainder owed life to poor parents, none of whom however were in extreme poverty. But I do not wish to deduce any other conclusion from these facts than the one just indicated, my practice being much more extensive among the rich than among the poorer classes.

I agree with authors generally in regard to the influence of the season; it is in summer or at the commencement of autumn that the disease is most common. I have not met with a single case in winter or spring. Dr. Cruveilhier has observed that softening of the stomach sometimes prevails epidemically. The German authors have made the same remark, and have insisted upon the influence of variations in the temperature. M. Bourgeois attaches great importance to elevations of temperature, and to the atmospheric condition during storms. There is no doubt of epidemic influence.

According to my observation the disease is more commonly primary than secondary; authors take a different view from confounding the

disease and the lesion. Let me explain. Authors have commenced with this principle, that softening of the stomach was the exclusive anatomical characteristic of the disease. Therefore they have reckoned as so many unities all of the cases of softening of the stomach found after exanthematous fevers and simple and tubercular meningitis, etc.; a detestable kind of statistics which conjoins unlike unities. The fact that the diseases enumerated by authors occur precisely at the epoch of life at which the disease I am describing is never or almost never seen, demonstrates the absurdity of this method of reasoning. Besides the symptoms are entirely different from those which we have described in the secondary softening of the stomach, which supervenes in meningitis and in exanthematous fevers.

The causes which we have detailed are predisposing causes, but some of them may act occasionally as proximate causes; such are sudden changes of temperature, indigestion, the administration of irritant remedies. I have numerous examples of these different causes, but along with them I have always found the train of predisposing causes, which I have enumerated.

[*Conclusion in the next Number.*]

ART. V.—*Clinical Reports of the College Infirmary, Richmond.* By Drs. MAYO and PEACHY.

CASE 1. *Gunshot Wound and Fracture of Cranium with Depression.* (Reported by Dr. T. P. MAYO, of Richmond.) Amos, æt. 40, was brought into the Infirmary on the 10th of Nov. 1852, with the following injuries: A wound from a pistol ball in the region of the left scapula; another in the posterior portion of the left thigh, and a third in the right gluteal region. Upon an examination of his head, there was found a contused wound upon the forehead, but no fracture of the bone at that point. Over the left parietal bone was another wound accompanied with a punctured fracture of the cranium.

The ball, which had entered near the shoulder, could be distinctly felt through the integuments about the middle of the spine of the scapula; an incision was made at that point, and with the aid of a small pair of forceps it was removed from its position, where it was slightly imbedded in the bone. All attempts at tracing the direction which the two remaining balls had taken proved unsuccessful.

The attention of the surgeon was now directed to the wounds of the head. A crucial incision was made through the scalp, and the flaps dissected back, so as thoroughly to expose the fracture.

Although there was no symptom of compression, yet the certainty that in this case there were fragments of the inner table of the skull detached and lying loose upon the dura mater, demanded, in the judgment of the operator, the instant removal of the fractured portions.

The small trephining saw was used, the elevator passed under the seat of fracture, and the pieces removed. As was expected, several splinters from the inner table were found and extracted with the forceps. The wound was now brought together, water dressing applied, the patient put to bed, and flaxseed poultices applied to the gunshot wounds.

This treatment was continued, and every thing went on favourably until the 17th, when symptoms of gangrene of the whole of the left thigh supervened. Irritative fever set in and the patient died on the 23d, 13 days after admission.

Post-mortem. Upon removal of skull the dura mater presented a perfectly healthy appearance. The ball which entered the left limb was found flattened, having struck against the femur, and then buried itself among the soft tissues. The other, after a long and tedious search, was found in the centre of the head of the right femur. The preparation is now in the museum connected with the Institution.

Case 2. *Extirpation of the Eye-ball.* (Reported by Dr. Peachy.) Parker, a negro man, æt. 50, entered the Infirmary February 2, 1853. His right eye-ball protruded considerably beyond the lids. Its conjunctiva was inflamed and thickened; a deep ulceration occupied the cornea; pus freely escaped upon moderate pressure from a fistulous orifice in the centre of the upper lid, just beneath the orbital ridge. A probe introduced into this fistula, grated upon the denuded orbital plate of the frontal bone.

Nothing was known of the early history of the case except that the patient had experienced great pain in the upper portion of the orbit, and that inflammation had subsequently involved the entire ball. The upper lid had swollen, and an abscess had pointed at the orifice above mentioned.

The history of the case, and the appearances at the time of admission, led to the diagnosis of periosteal abscess of the orbital plate of the frontal bone, causing destructive inflammation of the eye-ball, and rendering extirpation necessary.

The patient being anæsthetized, Dr. Johnson made an incision at the outer canthus, prolonging the fissure of the lids, carried the scalpel around the ball to divide the conjunctiva, severed the oblique and recti muscles, and cut through the optic nerve. The globe of the eye, secured with a double hook, was then removed, and the cavity was filled with lint to stop some slight hæmorrhage.

After the parts had healed, the fistula still continued to discharge

pus. Injections of sulphate of copper were employed, and the patient was discharged well on April 11th, 1853.

CASE 3. *Rupture of the Tendon of the Rectus Femoris, above the Patella.* (Reported by Dr. MAYO.) George, æt. 58, entered the Infirmary to undergo treatment for a rupture of the tendon of the rectus muscle of the thigh which had occurred some time previously in consequence of a fall.

The patient had suffered much pain, heat and swelling near the joint. From the inflammation he had recovered by maintaining rest, &c. At the time of entrance here, he was unable to extend the leg, and a distinct depression was noticed between the upper edge of patella and retracted end of the tendon; the distance between the two was at least two inches. The inclined plane and a figure of 8 bandage, with connecting straps, was all the treatment used. The patient had suffered with the rupture four months or more. At the end of a fortnight's treatment the ruptured ends had united, and in three weeks the limb had resumed its usual motions. Before applying a figure 8 bandage, both the leg and thigh were accurately wrapped in long bandages.

CHRONICLE OF MEDICAL SCIENCE.

The translations and abstracts under this head, are made expressly for this Journal.

ANATOMY, PHYSIOLOGY AND ORGANIC CHEMISTRY.

1. *Decisive Experiment—Proving that the Chief Motive Power of the Blood is derived from Respiration.* By Dr. CARTWRIGHT, of New Orleans.

While writing this article, June 17th, 1853, there is a living witness, in the court-yard of my office, proving the truth of the doctrine taught by Moses—that the life of the flesh is derived from the blood, and the physiological principle, announced some years ago by Mrs. Emma Willard, that its chief motive power is derived directly and immediately from respiration. The witness is a live crocodile, upwards of six feet in length, and about two feet in circumference. Gen. Felix Houston and Dr. Backee saw it yesterday crawling about the yard. Dr. B. Dowler and some other physicians and individuals have seen it to-day. It has been visited by a number of scientific men ever since the 13th instant. On that day, at ten minutes of 10 o'clock, A. M., its trachea was tied

in presence of Drs. Dowler, Backee, Copes, Wharton, and several others. The temperature of the room was 87°, that of the reptile's body 78°. In twenty minutes after the ligation it fell into a state of asphyxia. But soon the liver began to act spontaneously, and it had some four or five copious dejections from the bowels. As the purging progressed it began to recover from the asphyxia, and at length sprang from the table, and snapped at the by-standers. It was supposed that these unlooked-for phenomena might be owing to the trachea not being sufficiently secured to prevent the admission of air into the lungs. Two additional ligatures were placed upon it. Yet the heavings of the chest and a sound resembling respiration continued to be observed. This proceeded, no doubt, from the consumption of the atmospheric air stored away in the large air-sacs, which are known to exist in the lungs of the saurian tribe of animals, and some others that can remain under water a long time without breathing. The air-sacs answer the purpose of diving-bells. After the carbonic acid, retained in the blood by the compression of the trachea, was thrown off by the spontaneous action of the liver, the air contained in the sacs, or natural diving bells, was sufficient to support a low degree of vitality. With a view of compressing the sides of the air-sacs together, to prevent the air therein from being used by the lungs, and the carbonic acid from escaping, the abdomen, chest and cloaca were compressed by a bandage. The bandage was applied at 11 o'clock, and in a few minutes the reptile again fell into a state of asphyxia. At half after 11 o'clock fire was applied to the most sensitive parts of the body. Some slght twitching of the muscles followed the application, proving that sensation and muscular irritability were not wholly destroyed. At this stage of the experiment the company left to visit Prof. Riddell's chemical laboratory to witness an experiment the Professor's brother was making. At fifteen minutes after 12 o'clock the company re-assembled; having been absent three quarters of an hour, and found the crocodile dead. Muscular irritability seemed to be entirely destroyed. Fire was repeatedly appplied to the most sensitive parts of the body, and not a single movement, twitch or symptom of vitality could be elicited thereby. After ten minutes had been spent to enable the gentlemen present to try experiments to extort a symptom of vitality, and after they had all convinced themselves that the animal was certainly dead, I proceeded, at twenty-five minutes after 12 o'clock, to make a dissection, and to expose the abdominal and thoracic viscera to view. The whole extent of the abdomen and thorax was laid open. A cross incision was also made, and the anterior and lateral walls of the thorax and abdomen were fastened back by hooks, so as to bring the lungs, liver, bowels, and the sac containing the heart, under the direct action of the senses of sight and touch. No twitch or the smallest indication of life was elicited by the dissection. The animal had been previously unbound, and lay on the table—a dead subject undergoing dissection. At length the pericardium was slit open by an incision five inches in length—exposing the heart and its auricle to view. On exposing the heart to the external air, and taking it in the hand, slight twitches or muscular contractions, eight times in a minute, were felt.

At half after 12 o'clock, more than two and a half hours after the ligation, insufflation was commenced by inserting the nozzle of a common sized fire bellows into the trachea. At this stage of the proceeding the company got tired and began to drop off, being fully convinced that neither insufflation nor nothing else could restore life. The process of insufflation, in about ten minutes, appeared to begin to change the tissues of the reticular network of the lungs to a brighter color. This was supposed, however, to be owing to the direct action of the external air on the membranes. At length small blood vessels, barely visible, began to be seen on the exposed surfaces, where none could be seen before—proving that the blood was in motion through the pulmonary tissues. The heart was now felt, and its pulsations had become evidently much stronger and had increased from eight to eighteen beats in a minute. The insufflation was steadily persevered in until 1 o'clock, when the motions of the heart had increased to 34 pulsations. Fire was now applied, and some faint evidences of returning muscular irritability were elicited. An ice-water enema was thrown into the bowels, and the whole surface of the body, including the exposed viscera, was frequently wetted with ice-water. As the weather was very hot, this measure was resorted to, to prevent the blood from undergoing chemical decomposition. At ten minutes after 1, the animal seemed to revive, and made ineffectual efforts to breathe. The intercostal muscles and the diaphragm having been cut, the efforts were fruitless. Soon after this, fire was applied, and it writhed its body and moved its tail. As yet the head appeared to be perfectly dead, the eyes glazed and motionless. At half after 1, it would move and writhe its body on being rubbed with ice. At thirty-five minutes after 1, the bellows was removed, and a metallic tube, with a calibre large enough to admit the little finger, was inserted into the trachea. Dr. Copes sewed up the rent in the pericardium, and also stitched together the muscles of the throat and abdomen, which had been divided by the crucial incisions. The dense skin was pierced by an awl, brought together and secured by sutures. At 3 o'clock the other extremity of the divided trachea was put into the tube, and the divided ends brought together and fastened over the tube. The crocodile was then removed from the table and placed under the hydrant. It breathed freely, opened its eyes, and life and intelligence were restored. Dr. Dowler, being unwell, had left before the resuscitation. Indeed all had left, except Drs. Copes, Wharton and Nutt. I sent for Dowler, and when he returned and saw the crocodile alive, he raised his hands and said, "*glorious experiment.*"

Two days ago, the poor reptile appearing to suffer from the tube in the trachea, I removed it. Dr. Dowler calls every day to see the subject. But I entertain no hopes of its ultimate recovery, as the wounds inflicted on it, in order to expose the viscera to view and to watch the changes which occurred during the passage from death unto life, are of too serious a nature to be cured.

Practical Remarks.—In exposing the viscera, care was taken to avoid cutting any large bloodvessel or piercing the lungs. If much

blood be lost, resuscitation cannot be effected from the want of the material to operate on. It is thought, however, that the loss of a little blood is rather beneficial than otherwise, as it enables the remaining mass to move more readily through the lungs, by removing the congestion in the pulmonary capillaries. In measles, when the eruption has been repelled and the skin gets blue and cold, the loss of a little blood from the arm will facilitate the circulation through the lungs, clear the complexion, warm the skin and raise the pulse. In concussions or severe shocks, interrupting the respiratory movements and impairing the action of the heart, the modern practice is to give stimulants and to avoid bleeding until reaction occurs. But too often reaction never does occur, from the blood stagnating in the pulmonary vessels. In such cases, the loss of a little blood will facilitate the transmission of the balance through the lungs by removing the congestion. Dr. Dowler was the first to prove, by practising venesection on the dead subject, that the blood, in certain cases, will not only run out, but will flow in a jet and remove post-mortem congestions. The erroneous theory, that the nervous system is the fountain of life, has caused the old practice of bleeding, vomiting and purging for concussions of the brain and severe shocks of the body, to be abandoned, and the stimulating of the nervous system, to produce reaction, to be substituted for it. The nervous system, deriving its life from the circulating blood, and the blood its life and motion from respiration, cannot be stimulated while the blood is stagnant and the respiratory actions suspended. To restore the respiratory process and to put the blood in motion, is the true indication in such cases.

It also appears, by the facts elicited in the experiment just related, that the application of ice water had a good effect in aiding the insufflation to restore animation. The ice water injection may also have brought the portal system to aid in decarbonizing the blood.

The experiment shows, that it is not so much the absence of oxygen, as the retention of carbonic acid in the blood, which kills so quickly when respiration is suspended; because, when the liver acted, the animal partly recovered from the asphyxia—but until that great decarbonizer of the blood, second only to the lungs, began to act, the oxygen in the air-sacs was not sufficient to prevent the accumulated carbonic acid in the blood from producing asphyxia. In the cold abstraction of death produced by deprivation of oxygen and accumulation of carbonic acid in the blood, and also in some congestive diseases, the application of ice water internally and externally would seem to be much better than hot applications and stimulants. For frozen limbs, snow is known to be more effectual than any form of heat. In resuscitating the drowned, stimulants and hot applications are injurious.

The wonderful power of hepatic or bilious purging was well illustrated in the early part of the experiment. Bilious vomiting or bilious purging, when the lungs are crippled in their function, often restores the body to life and energy in cases apparently the most hopeless. The frequency of cold congestive diseases in the South, with pulmonary op-

pression, and the manifest good effects of calomel and such medicines as excite the liver into action, led, some years ago, to the employment of mercurial cathartics in almost every ailment, without due discrimination. In Europe the cases calling for their employment are much less numerous than in southern latitudes. That method of aiding the lungs, in decarbonizing the blood, is not duly appreciated by European practitioners. Nor can they see why a patient, who would sink under the action of the mildest laxative, should rise and walk before a strong mercurial cathartic has ceased to operate. In typhus, when the lungs began to flag in their action, a twenty grain dose of calomel was a favorite remedy with Dr. Chapman. The experiment on the crocodile throws some light on the *modus operandi* of that remedy, and also explains the reason why mercurial purgatives are particularly useful in severe wounds of the head, concussions of the brain, and other lesions interrupting the excretion of carbonic acid by the lungs.

Experiments of this kind are full of practical instruction, and ought not to be considered as suiting the visionary more than the practical man. They tend to prevent the practical man from being led into error by visionary theories. Visionary practitioners do not trouble their heads about facts. In contemplating the anatomy of the dead subject, theory conjectured that the heart was the chief agent in circulating the blood. But in seeing the dead subject brought to life, with the viscera exposed to the sight and touch, it plainly appeared that the received theory of the power which produces the circulation of the blood, is not correct—that the *primum mobile* of the circulation is in the reticulated pulmonary tissue and not in the heart. The reddening of that tissue and the injection of its vessels with blood, was preliminary to the restoration of the heart's activity. The nerves, which had been insensible to fire, hooks and forceps, had their sensibility restored in proportion as the redness, motion and vitality of the blood were restored—proving that the life of the nerves and the flesh is in the blood, and that the blood derives its life and motion from respiration.

Dr. Dowler's experiments are forcing physiologists to adopt the doctrine of a diffused sensorium. He has only published a few scraps of the evidence proving that doctrine. He has fully ten volumes of unpublished facts containing evidence in its support, which will be perfectly irresistible. I am not the interpreter of his opinions, but his facts are common property, speaking for themselves. Instead of the brain and nerves being the sensorium, as the Greek and modern philosophers taught him to believe, his own experiments, Riddell's and mine, will demonstrate positively that the blood is the sensorium, as Moses said it was; if by sensorium be meant the life, the sensibility, the will, the passions, and that species of intelligence called instinct.

In a former experiment, reported in vol. xlvii., page 79, of this Journal, in less than an hour after the trachea had been tied, a very fierce and vigorous animal, called the battle-ground crocodile, was handed over to Dr. Dowler and some eight or ten other physicians, to extort a single symptom of life if they could. The heart was still beating, but muscular irritability had been destroyed in all other parts of the body,

by the carbonic acid retained in the blood by ligating the trachea. Fire, knives and forceps, on the bare nerves, failed to extort a single symptom of vitality. In that experiment, insufflation of the lungs was not attempted until after the failure to extort any evidences of life or sensibility. When it was attempted, the lungs were found to be too much torn to hold air, and the process was abandoned. But in the present experiment, it was not until an hour and a half after the compression of the abdomen and thorax by a bandage, and more than two hours and a half after the ligation of the trachea, that insufflation was commenced. It not only restored muscular irritability, but it brought the animal to life, and it is living yet, the fifth day after the resuscitation.

The doctrine of Moses that life, with all its attributes of sensation, volition, mobility and intelligence, exists in the blood (the term life, in Hebrew, meaning life with its attributes), is no more difficult to understand than the doctrine of the Greeks and modern physiologists, which presupposes that life, with all its attributes, is located in the pulpy substance called the brain and its appendages. That the Greeks were wrong and Moses right, can be proved not only by the crocodile, but by every turtle and terrapin on the wide earth. When the heads of these animals are cut off, they will continue to make intelligential motions for some time afterwards, and some of them, as my friend Dr. Cornelius S. Baker, of Bucks county, Penn., has kindly reminded me, will dart out their headless necks at their persecutors (as the snapping turtle, for instance) proving that they are not only alive, but retain the passion of anger without a head, about as well as with it. Such phenomena are perfectly irreconcileable with the received doctrines of modern physiologists and psychologists, or with the philosophy of the Greeks and Romans, but are in beautiful accordance with those doctrines which have come down to us from the Hebrews.—*Boston Medical and Surgical Journal*, July 13, 1853.

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2. *On the Theories of Animal Heat.* By Sir B. Brodie, Bart.

The general evidence in favour of the chemical theory of animal heat has received many important additions of late years. The fact that a considerable amount of heat is generated by plants during the processes of germination and flowering, when, like animals, they withdraw a large amount of atmospheric oxygen, and replace it by carbonic acid set free from their own tissues, has long been known; and very careful observations upon the *Colocasia odora*, a plant of the Arum family, which is remarkable for the elevation of temperature which its spadix undergoes at the height of the flowering period, have demonstrated that the production of heat is constantly accompanied by the generation of carbonic acid, that it does not take place if the flowers be made to expand in an atmosphere of nitrogen, and that during both the attainment of the highest point and the subsequent decline, there is a close correspondence between the amount of oxygen consumed in successive hours, and the excess of heat shown by the spadix above

that of the surrounding medium. So, again, the researches of Mr. Newport upon insect temperature have shown that the same constant coincidence exists between that generation of heat which they occasionally exhibit, and the replacement of atmospheric oxygen by carbonic acid. Moreover, since we may regard it as all but demonstrated, that the animal can under no circumstances convert the non-azotized saccharine or oleaginous compounds so abundantly supplied by plants into the albuminous constituents of its own tissues, the large amount of these substances consumed by animals, and the provision obviously made for their digestion and for their reception into the circulation, become utterly meaningless, if they are not introduced for the express purpose of being applied to the maintenance of the combustive process, and the consequent generation of heat. Further, the direct effect of withholding food altogether, as the experiments of Chossât have shown, is to produce a complete absorption of the fat, which, with the products of the waste of the azotized tissues, is burned off day by day for the maintenance of the animal temperature; the duration of life in this condition is strictly proportional to the amount of combustive material previously stored up in the form of adipose tissue; and when this is all exhausted, the heat of the body, which had previously suffered but little decline, diminishes from hour to hour, until the animal dies of cold—the application of external warmth being still able to arouse it to activity, even when it has sunk into a state of torpor approaching to coma. All experiments upon the respiration, moreover, concur in showing that the liberation of carbonic acid is much more rapid at low temperatures than at high; showing that there exists within the system some means of self-adjustment, whereby the amount of fuel consumed is proportioned to the quantity of heat which it requires to produce, for the maintenance of its temperature at the regular standard.

The recent researches of M. Bernard upon the functions of the liver, leave little room for doubt that one of the most important purposes of this organ is to prepare the respiratory pabulum; not so much, however, in the mode originally supposed by Liebig, by separating it from the blood as bile, this to be reabsorbed and subsequently burned off in the lungs; but rather by transforming, without separation, certain materials previously contained in the blood, so that as the current passes through this gland, both the substances newly absorbed from the alimentary canal, and those which have been taken up in the course of the general circulation, are subjected to its influence, and then pass on, through the right cavities of the heart, to the pulmonary vessels, in a state of peculiar fitness to undergo a further transformation by the influence of the oxygenated atmosphere which they there encounter. The combustive materials directly supplied by the food are chiefly, in herbivorous animals, those of the farinaceous and saccharine, and those of the oleaginous types. The farinaceous matters are converted by the digestive process into the saccharine form; so that grape-sugar is found in the mesenteric veins after the ingestion of such aliment, as is also cane-sugar if this have been taken in. But the blood

is not very tolerant of the presence of grape-sugar, still less of that of cane-sugar; so that if these substances be injected into the *jugular vein* in any quantity, they are speedily detectible in the urine. During their passage through the liver, however, they are converted into a new form of sugar, which has been termed "liver-sugar," the characteristic properties of which seem to consist in its differing from grape-sugar, as grape-sugar differs from cane-sugar, that is, in being far more tolerated by the blood, and in being more readily converted into lactic acid. Hence when grape-sugar and cane-sugar are injected into the *vena portæ*, they do not show themselves in the urine; and the liver-sugar which is produced by their transformation is not traceable further than the pulmonary vessels, being speedily transformed, and in great part eliminated (probably passing the intermediate stage of lactic acid) by the respiratory process. But it is one of the most curious results of M. Bernard's researches, that the liver not only thus transforms other saccharine compounds, but that it generates sugar *de novo*, under circumstances which seem to forbid our regarding it as anything else than a product of the retrograde metamorphosis of the albuminous compounds. For M. Bernard has found sugar in the liver and hepatic blood of carniverous animals, and even in the liver of the mammalian fœtus and of the embryo chick; and so constant does the presence of this substance appear to be, that the production of a peculiar kind of sugar, specially fitted for undergoing the combustive process, must henceforth be regarded as one of the most important functions of the liver. It has been supposed that the sugar generated by the liver may be derived from fatty matters brought to it by the vena portæ; but we cannot find in Bernard's experiments, any evidence of this; and whilst we have no chemical reason for believing that sugar can be formed by the transformation of fat (which would be an inversion of the usual order of metamorphosis) we know that it may be generated as one of the products of the disintegration of muscular tissue, the juice of flesh having yielded *inosite*, a new form of sugar, to the analyses of Scherer.

It has been further shown by M. Bernard, that the liver produces a peculiar fat, from the constituents of the blood which passes through it; and it seems that this liver-fat, like the liver-sugar, may be the product of the transforming process, exercised alike upon materials newly absorbed from the alimentary canal, and upon the products of the disintegration of the tissues. That albuminous compounds in a state of retrograde metamorphosis may generate fatty matter, can scarcely, we think, be any longer questioned; since the phenomena of fatty degeneration concur with chemical evidence, to prove that this is one of the forms into which their elements pass, in preparation for their egress from the body.

Thus, then, it appears that the *respiratory pabulum* of carniverous animals, which is derived from the decomposition of the albuminous constituents of their food and of their own tissues, precisely corresponds with that which is furnished to the herbivorous races in the non-azotized articles of their diet; that the liver may be regarded as an organ specially destined to alter the characters of the blood, not

merely by what it separates *from* it, but also by the changes it makes *in* it; and that these changes have reference to the constant sustentation of the combustive process, by the preparation of certain organic compounds peculiar to the living body, of a nature that may enable them readily to undergo oxidation when exposed to the air. And it is a most interesting and suggestive fact, that the products of the disintegration of the system should thus be applied—by passing through the very same course—to the same final uses, as are served in a large proportion of the animal kingdom by organic compounds that cannot be rendered subservient to the production of animal tissue. We can scarcely fail to see in the whole of this arrangement, not merely a means of freeing the system from effete matters, but a scheme for the regular supply of the combustive apparatus with appropriate fuel; and those, if such there be, who deny that the production of animal heat is essentially dependent upon the conversion of hydrocarbonaceous compounds into water and carbonic acid, have to explain how these compounds can be eliminated, as we know they are by means of this exidating process, without the production of heat; and they have also to explain why the herbivorous animal should be instinctively impelled to injest a large amount of food, that can serve no histogenetic purpose in the economy, and why their digestive apparatus should be specially adapted to the reduction, solution, and conversion of non-azotized compounds, as well as to the introduction of azotized matter into the system.

The recent researches of M. Barral "On the Statistics of the Human Body," have afforded much additional information upon the subject of our present enquiry. He has carefully determined the ultimate constituents of the food, and of the various excretions, of four individuals, during five days, experimenting thus upon himself also during summer as well as in the winter; and presents us the results in an elaborate series of tables. We shall cite only a few of the most important. In the first place, the *carbon* of his food amounted to 5654·1 grains in winter, and 4090 grains in summer; and of this the proportion ejected in the form of *fæces* was 236·2 grains in winter, and 139·4 in summer; that eliminated by the *urine* was 234·6 grains in winter, and 211·5 grains in summer; whilst that which passed off by exhalation (pulmonary and cutaneous, the latter, however, being an insignificant fraction) was no less than 5183·3 grains in winter, and 3741·1 in summer. Thus we see how large a proportion of the carbon of the food is thrown upon the respiratory process for elimination, and how considerable a diminution takes place in the amount exhaled during the heat of summer, involving a corresponding difference in the demand for aliment. M. Barral's researches appear to afford the means of determining approximatively at least, how much of the *hydrogen* of the food is oxidized in the respiratory process, and how much of the water exhaled is really generated combustively. He found that of the whole amount of hydrogen taken in, not more than from one-eighth to one-tenth passes off by the other excretions, the remaining seven-eighths or nine-tenths being exhaled in the condition of watery vapor by the lungs.

Now of the *oxygen* ingested, he found that 3841·4 grains in winter, and 2757·6 grains in the summer, passed off by the lungs in the condition of water; and this would, of course, carry off its equivalent of hydrogen, also derived from the food, without any production of heat.* But the amount of hydrogen actually exhaled was 801·3 grains in winter, and 597·5 grains in summer; so that after deducting one-eighth of the weight of the oxygen, there remain 321·1 grains in winter, and 252·8 grains in summer, as the amount of hydrogen which could not have been oxidized and eliminated as water, save at the expense of the oxygen of the air, and which must therefore have undergone a combustive process whereby heat could not but have been generated.

Thus it appears certain, that we are not to look only at the combustion of carbon but to that of hydrogen, as a source of animal heat; but it is scarcely fair to reckon (as Prof. Liebig has done) the whole surplus of the oxygen absorbed, above that contained in the carbonic acid exhaled, as being consumed in this mode. For there are other oxidizing processes going on within the system, some of them of no mean importance; more especially the production of the sulphuric and phosphoric† acids from the sulphur and phosphorus contained in the protein compounds of the food, giving rise to the production of the alkaline sulphates and phosphates which are excreted by the urine. In fact, it may probably be stated, that there is scarcely a single chemico-vital transformation in the body, either *progressive* (that is to say, tending to the formation of living tissue) or *retrograde* (that is, tending to the reduction of the more complex histogenetic substances to the comparatively simple compounds which present themselves in the excretions), in which oxygen is not concerned. Thus, then, although the production of carbonic acid and water may be immediately effected by

* This will be obvious enough if we take the simple case of sugar, which is carbon plus the components of water, already united in equivalent proportions; the carbon being eliminated by combustion the water remains, to be carried of as such. A fatty body, on the other hand, is carbon plus hydrogen plus the components of water: here a portion of the hydrogen, as well as the whole of the carbon, is destitute of its equivalent of oxygen; and water is actually generated in the combustive process, in addition to that whose components were already united in the substance, although under another form.

† Professor Liebig has lately asserted, with his usual dogmatism, that no phosphorus exists in the body, or in the alimentary materials, except in the state of phosphoric acid; and further, that the notion that such other compounds of phosphorus exist in the body, and that phosphorus occurs in the protein-compounds in a state analogous to that in which sulphur exists in them, "proceeds generally from amateurs in science, and rests on superficial observations, without the slightest scientific foundation." (See his "Familiar Letters," 3d edition, pp. 451, 2.) We apprehend that several chemists, of no inferior authority as analysts, maintain a different opinion; and that there is abundant physiological evidence derived from the occasional luminosity of the urine, breath, and sweat, as well as of the solids of the body when undergoing decomposition after death, or even before life is extinct, which proves the existence of phosphorus either in a basic or in an imperfectly oxidized condition, as one of the normal constituents of the body; this phosphorus being usually completely oxidized within the system, and carried off as phosphoric acid in combination with alkaline bases, but passing into the excretions in its lower state, when, either from an absolute deficiency of respiration, or from the greater demand for oxygen set up by other matters contained in the blood, (alcohol, for example,) it does not undergo complete metamorphosis.

the combustive metamorphosis of saccharine and fatty matters, and although these matters, when not directly supplied as such by the food, are prepared within the body for the respiratory operation, yet the process of such preparation is one that really involves a great number of separate stages of metamorphosis, beginning with the conversion of alimentary materials into living tissue, and including all the changes which take place during the life of that tissue, and in the progress of its final disintegration. Hence, although the production of such part of the carbonic acid and water, as proceeds directly from the union of the carbon and hydrogen of the alimentary materials with the atmospheric oxygen, may be looked on as a simple combustive operation, yet as to the whole of the remainder, which proceeds from the disintegration of the tissues themselves, it must be admitted that the appearance of a given quantity of carbonic acid in the expired air, can only be looked on as the exponent or manifestation of a long series of changes of composition taking place in the interior of the body, of which it is one of the ultimate products. Some of the advocates of the Chemical theory of Animal Heat, have spoken of the body as if it were a mere furnace, into which a certain quantity of fuel is put, whose combustion affords a given equivalent of heat; whilst from its chimney there proceed so much carbonic acid, so much water, and so much imperfectly consumed smoke. The whole series of intermediate operations, whose original materials and final products alone are thus recognised, is completely ignored; and the confident assertions of the chemists, based, as they appeared to be, upon a very broad foundation in fact, have passed muster with the general, and even with the medical public, notwithstanding that there is a considerable body of facts, which are not only not explained by chemical doctrine, but which seem, at first view, to be really in antagonism with it. These facts cannot be passed over, either by the scientific physiologist or by the observant practitioner; for they force themselves upon the attention of the latter; whilst they must be recognised by the former, as having no less a title to his consideration than have the ordinary phenomena of calorification;—we refer to the local development of heat, or to local deficiency, altogether irrespective of the activity of the circulation; and to the connexion of such irregularities with peculiar conditions of the nervous system.—*Brit. and For. Med. Chir. Review.*

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3. *Examination of the Chyle of the Cow.* By M. LASSAIGNE.

The chemical composition of the chyle has been deduced from analyses of the chyle of dogs and horses at different periods.* The chyle of ruminating animals has not hitherto been examined. M. Lassaigne has profited of an opportunity furnished by M. Colin, *chef des travaux*

* For the results of the analyses of Simon and Rees of the chyle of horses and asses, and those of Tiedeman and Gmelin on dogs, see Simon's Chemistry of Man. Am. ed. p. 288 *et seq.*—[ED.

anatomiques at the school of Alfort, to analyse this fluid in the cow. The latter experimenter succeeded in procuring several quarts of chyle from the thoracic duct, by means of a silver tube inserted into the canal.

The chyle thus obtained was alkaline, very fluid, opalescent, and of a rose tint; left to itself for twenty-four hours, it was completely transformed into a transparent jelly, assuming the form of the vase which contained it. This coagulum, pressed in a linen cloth, allowed a serous, alkaline, and slightly salty liquid to exude, the density of which was 1009.

This serum was composed of:

Water, - - - - - -	96·63
Fixed principles, - - - -	3·37

The expressed matter presented, in its whiteness, its filamentous appearance, and its chemical properties, all the characteristics of fibrine.

When evaporated on a water bath, the entire chyle gave the following result:

Water, - - - - - -	96·40
Fixed substances, - - - -	3·60

A subsequent examination of the fixed matters, afforded the following result:

Water, - - - - - -	96·40
Fibrin, - - - - -	0·09
Albumen, - - - - -	2·80
Fatty Matter, - - - -	0·04
Chloride of Sodium, - - - -	0·50
Carbonate, phosphate, and sulphate of soda, -	0·12
Phosphate of lime, - - - -	0·05
	100.

Journal de Chimie Médicale. June 1853.

MATERIA MEDICA, PHARMACY, AND MEDICAL CHEMISTRY.

4. *An Inquiry into the Action of the Anthelmintics.* By Dr. KUCHENMEISTER, of Zittau.

Dr. Küchenmeister has examined the various vermifuges, by immersing the living intestinal worms of fowls, cats and dogs, in albumen, at

a temperature exceeding 77° Fahr., and adding the anthelmintics in the form of infusion or of powder. In some cases, a mixture of warm milk and water was substituted for the albumen. The experiments were not continued for more than from forty to forty-eight hours, if the worm had not been killed before the expiration of that time. Dr. Küchenmeister made use of electricity as the most delicate reagent for proving the occurrence of the death of the worms. In the first place, electricity cannot be considered as a vermifuge. The author subjected a female *Heterakis vesicularis*, taken from a partridge that had been killed, to the action of a rotatory apparatus, which was kept up with longer or shorter intervals during an entire day. The animal was not destroyed by the experiment. He next tried the remedies employed for the removal of tæniæ, and first tested kousso in the following manner:—A living *Tænia crassicolis*, procured from a cat, was placed at four o'clock in a mixture of albumen and dolichos pruriens. The worm appeared to be perfectly well in this mixture, and at two o'clock on the following afternoon exhibited the most vigorous movements. The tænia was now transferred to a vessel containing a mixture of infusion of kousso and some of the infused as well as some of the fresh powder with albumen. The temperature of the mixture was 30° R. (99.5° F.) On its introduction, the worm quickly extended itself; after some time it was found to be dead, its colour having changed to a dirty reddish-yellow. Two *Tæniæ serratæ* were placed at about half-past one in the afternoon in a mixture of albumen and kousso; at two o'clock they were dying, and at three completely dead. Two *Tæniæ serratæ* from the same dog were brought in contact with kousso and milk at half-past one in the afternoon, and at two o'clock were dead. Two *Tæniæ serratæ* were placed at half-past one in the afternoon in albumen, mixed with decoction of pomegranate root and with some of the powdered root: they died in three hours. Two others were placed in milk mixed with the decoction only: they died in three and a half hours. A *Tænia crassicolis* was put into a mixture of albumen with ethereal extract of male fern: it died gradually in three hours and three quarters. A number of *Tæniæ cucumerinæ* were placed in a mixture of albumen and oil of turpentine: they were dead in an hour and a quarter.

A number of the same were put into a mixture of albumen and castor oil; they appeared lively at first, but were dead in seven hours. Similar worms were put into a salad, composed of pieces of unwatered herring, boiled potatoes, large pieces of onion and garlic, albumen, vinegar, and a large quantity of oil. They died in eight hours. Lastly, the author tested the vermifuge powers of the brown oxide of copper; fifteen grains were administered in the course of four days to a strong cat. When the body was opened, the entire intestinal canal was found to be full of fluid, yellow, flaky fæces; the intestine was softened, and denuded of epithelium, especially at the termination of the ileum, where the adjoining Peyer's glands were much swollen, particularly in two situations, one of which was an inch and a half long by one-third of an inch broad; the other was nearly circular, and its

diameter one-third of an inch. The cat had been purged. The tæniæ and ascarides it contained were lively. It would hence appear that this substance is both inefficacious as a vermifuge and dangerous to the system. The following table contains the results of the above experiments:—

In milk boiled with kousso tæniæ died in half an hour.		
In a mixture of oil of turpentine and albumen, in	1 to 1¼	hour.
In decoction of kousso with albumen, - -	1½ to 3	hours.
In decoction of pomegranate root with milk, -	3 to 3½	"
In decoction of pomegranate root with albumen,	3	"
In ethereal extract of male fern with albumen,	3½ to 4	"
In castor oil with albumen, - - - -	8	"
In salmagundi with garlic and onions, - -	8	"

Kousso would therefore seem to be the most efficacious remedy against tæniæ. When pomegranate bark and male fern root fail, their failure may be owing to the habit of administering a laxative in from four to six hours after the exhibition of the vermifuge, by which the latter may be carried beyond the worm. With regard to pomegranate root, it must be observed, that in large doses it occasions diarrhœa. The same remark applies to castor oil. The author also alludes to cold water, strawberries, dolichos pruriens, and filings of tin. When tæniæ are placed in water containing ice, they are instantly benumbed, and if allowed to remain in it, they will always be found at the end of ten hours to be quite dead. Strawberries may be useful as a mild remedy in cases of tapeworm; if large quantities of them be taken on an empty stomach, entire portions of the worm will often be passed. Dolichos pruriens, with which the author tried many experiments, appears to possess no power of destroying worms. The author has also minutely studied the medicines recommended for the removal of round worms. In albumen, these worms behave as the tæniæ; in water, at about 77° F., they live for some days, but swell, stiffen, become longer, thicker, and more sluggish; they lose their power of suction, and their motions become slow and only partial—they resemble leeches which have gorged themselves. In general, however, the males and young neutrals resist the effects of water longer than the mature, impregnated, egg-bearing females, which become quite rigid and inflexible, and swell considerably. Milk and whey affect the worms like water. The following are the medicines, the effects of which were tested:

1. Camphor. An ascaris lived from eighteen to twenty hours in albumen into which some camphor had been introduced. 2. A mixture of oil of turpentine and albumen killed some ascarides which were placed in it from two and a half to six hours. 3. Ascarides lived forty hours in albumen and wormseed, whether the latter was employed in the form of powder or infusion. 4. Some ascarides were placed in albumen mixed with santonine; they did not die in it, nor did they die in a watery infusion of santonine. When santonine was dissolved in oil, especially in castor oil, and mixed with albumen and ascarides,

the latter died in ten minutes. An injection of santonine and castor oil was thrown up the rectum of a cat, and produced numerous motions containing dead worms; and on killing the cat, the entire of the lower portion of the intestinal canal was ascertained to be free from worms, while four were found near the stomach quite rigid and extended, and retaining but little life. A *Tænia crassicolis*, however, was found in the intestines, and appeared to be quite uninjured and very lively. 5. A mixture of albumen and aniseed, with a strong infusion of the latter, killed the worms in about twenty-four hours. 6. Parsley, mixed with albumen, killed ascarides very slowly. 7. Flour of mustard and albumen destroyed them in about four hours. 8. In rue the worms lived upwards of twenty-four hours. 9. The same was the case with millefoil. In contact with tansy, valerian and camomile, great numbers of them lived for twenty-four hours. With onions and garlic they perished in from ten to fifteen hours. A decoction of cloves, with or without albumen, killed them in twelve hours. In an infusion of ginger, with or without albumen, they lived about twenty-four hours. Petroleum, mixed with albumen, killed them in less than six hours, as did also oil of cajeput and albumen.

A series of vermifuges, taken from the class of balsamics, was tried in like manner, namely, assafœtida, ammoniacum, balsam of Peru, extract of juniper, and Venice turpentine. In all these the worms lived more than twenty-four hours. Of the class of empyreumatics (brenzlichen stoffe) the following were tried:—Oleum chaberti, [a mixture of four parts of oil of turpentine, and one of the animal oil of Dippel,] oil of amber, castor oil, tar water, creasote, wood-vinegar, and wood-soot. In these, for the most part, the worms lived from twenty-four to forty-eight hours; except the wood-vinegar, in which they lived rather more than twelve; and creasote, in which they died within two hours. Of bitters, the author tried aloes, gamboge, ox-gall, wormwood, myrrh, gentian, quassia, hops, bitter orange, and acorus calamus; in all these the ascarides lived from twenty-four to forty hours. Of astringents, pure tannic acid, pomegranate root, kousso, extract of walnuts, cinchona bark and quina, elm bark, willow bark, the flowers and stalks of meadow sweet, oak bark, dragon's blood, catechu and kino. In these the worms died in from twenty-four to thirty hours, with but two exceptions, namely, tincture of galls and pomegranate root, both of which killed them in the space of eleven hours. Of saline preparations, sulphate of soda, chloride of sodium, and the roe of the herring, were tried. In the first the worms died in from fifteen to eighteen hours; in the second, in from two to six; and in the roe of the herring, in four hours. The following metallic poisons were experimented on:—Arsenic, calomel, corrosive sublimate, and the salts of tin, of lead, and of copper. Corrosive sublimate alone destroyed the worms in so short a time as two hours; all the other metallic salts required a much longer period. From these experiments it would appear that santonine, mixed with oil, is the most powerful vermifuge, then chloride of sodium, the roe of the herring, garlic, onions, &c. The author advises that santonine should be given as a vermifuge;

mixed with oil, in the proportion of from two to five grains to an ounce of castor oil. This solution should be given in the doses of a tea spoonful until the effect is produced. As auxiliary treatment, chloride of sodium, herring-brine, mustard, onions and garlic, may be employed.—*Froriep's Tagsberichte über die Fortschritte der Naturund Heilkunde.* Pharmakologie, Band 1, p. 317.—(*Dublin Quarterly Journal.*)

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5. *Translucent Glue.* By M. LENHER.

Dissolve fifteen grains of caoutchouc in two ounces of chloroform, add half an ounce of mastich, and macerate for eight days, the time necessary for the solution of the mastich in the cold. If greater elasticity is required the amount of caoutchouc may be augmented. This product may be advantageously substituted for marine glue in many circumstances. It is very useful in cementing glasses for microscopical preparations.—*Revue de Thérapeutique,* May 15th.

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6. *On the Preparation of the Perchloride of Iron used as a Coagulant of the Blood.* By M. BURIN DE BUISSON, of Lyons.

[We extract from *l' Union Médicale* the method of preparing the concentrated solution of the perchloride of iron, which M. Pravaz has employed in obliterating arteries and aneurismal sacs. The treatment of M. Pravaz has been fully described in former numbers of this Journal.]

Take of commercial sulphate of iron, two pounds; water, six pounds; iron filings, the fifth of a pound; sulphuric acid, ℥ss.; put the whole in an enamelled cast iron vessel, and heat with a sand-bath until gas is no longer disengaged; filter, add half a pound of liquid hydrosulphuric acid, and allow the whole to rest for twelve hours. Then boil for half an hour, and filter. Add concentrated sulphuric acid, ℥viss.; boil, and add pure nitric acid, gradually, until it no longer causes the escape of red fumes. Take the vessel from the fire, and pour into the fluid thirty times its weight of cold water. The whole of the iron will be precipitated as peroxide by adding a slight excess of ammonia. Let the precipitate be washed repeatedly and dried.

This oxide is then calcined at a red heat in an iron vessel. This is the martial saffron of the shops.

The perchloride of iron is then procured in the following manner: Take of peroxide of iron, ℥vjss.; Hydrochloric acid, lbs. ij., digest for six hours, and then boil in a water-bath until an almost complete solution of the oxide is obtained; this should be done in a porcelain capsule, weighed beforehand. The liquid is decanted to separate the undissolved oxide, and the former is carefully evaporated upon the water-bath, constantly stirring, to the consistence of thick syrup, which is then weighed. Half this weight of distilled water is then added, the

heat is kept up for a few moments, and the whole is thrown on the filter. The capsule and the filter should now be washed with a quantity of water equal to that used in the last place, and to the first fluid obtained, as much of the second is added to get a mixture of the density of from 43.5 to 44 degrees.

By proceeding in this manner a very limpid fluid is obtained, with a slight acid reaction, but perfectly pure, having reached the maximum of saturation, and always identical. It may be kept without any of the salt being thrown down, provided the bottle be well stopped; the colour is dark brown when the liquid is looked at in full, and of a greenish gold colour when held to the light, or seen in a thin stratum. Five or six drops of this fluid, mixed with the white of an egg diluted with six drachms of water, are sufficient to coagulate the whole into a mass in the space of fifteen seconds. This mass firmly adheres to the bottom of the glass when the latter is turned up, and takes a pretty long time before it slowly drops, when the watery parts begin to run off, as the serum separates from coagulated blood.

MEDICAL PATHOLOGY AND THERAPEUTICS.

7. *On the Influence of Parasites in the Production of Disease.* By Joseph Leidy, M. D., Professor of Anatomy in the University of Pennsylvania.

In many animals entozoa and entophyta are almost never absent, and probably when in their natural habitation, and few in number, or not of excessive size, are harmless, as observed by Dujardin in the introduction of his excellent work on Intestinal Worms: "Les helminthes se développent dans un site qui leur convient, sans nuire plus que les lichens sur l'écorce d'un arbre vigoureux. Ils ne peuvent devenir nuisibles, généralement, que par suite d'une multiplication excessive, laquelle semble alors être une des conséquences d'un affaiblissement provenant d'une tout autre cause, d'une mauvaise alimentation, du séjour dans un lieu froid et humide, etc.: sans cela, les helminthes naissent et meurent dans le corps de leurs hôtes, et peuvent paraître et disparaître alternativement sans inconvénients."

Many important diseases have been supposed to originate from parasitic animals and vegetables. The former are not the true entozoa, for these are too large, and may be detected by the naked eye, but they are considered to be animalculæ so small that they cannot be discovered even with the highest powers of the microscope. But, independent of the fact that the existence of such entities is a mere suspicion, none of the well known animalculæ are poisonous. At various times I have purposely swallowed large draughts of water containing myriads

of *Monas, Vibrio, Euglenia, Volvox, Leucophrys, Paramecium, Vorticelli,* etc., without ever having perceived any subsequent effect.

The production of certain diseases, however, through the agency of entophyta, is no longer a subject of doubt; as in the case of Muscardine in the Silk-worm, the Mycoderm of Porrigo favosa in Man, etc.; but that malarial and epidemic fevers have their origin in cryptogamic vegetables or spores requires yet a single proof.* If such were the case minute vegetables and spores, conveyed through the air, and introduced into the body in respiration, could be detected. The minutest of all known living beings is the *Vibrio lineola* of Müller, measuring only the 36,000 of an inch, and the smallest known vegetable spore is very much larger than this, whilst particles of inorganic matter can be distinguished the 200,000 of an inch in size.

I have frequently examined the rains and dews of localities in which intermittents were epidemic upon the Schuylkill and Susquehanna rivers, but without being able to detect animalculæ, spores, or even any solid particles whatever. I have examined the air itself for such bodies, by passing a current through clear water. This was done by means of a bottle, with two tubes passing through a cork stopper; one tube dipping into the water, the other reaching not quite to its surface. By sucking upon the latter tube, a current of air passed through the former, and was deprived in its course of any solid particles. Ordinarily, when the atmosphere was still, early in the morning, or in the evening, neither spores nor animalcules could be detected. When piles of decaying sticks or dry leaves were stirred up, or the dust was blown about by the wind, a host of most incongruous objects could be obtained from the air; none, however, which could be supposed capable of producing disease.

To assert, under these circumstances, that there are spores and animalculæ capable of giving rise to epidemics, but not discernible by any means at our command, is absurd; as it is only saying in other words that such spores and animalculæ are liquid and dissolved in the air, or in a condition of chemical solution. That the air may be poisoned by matters incapable of detection by the chemist, is proved by the emanations from such plants as the *Rhus vernix, Hippomane mancinella,* etc.

Smithsonian Contributions to Knowledge.

SURGICAL PATHOLOGY.

8. *Difficulties and Dangers of Tracheotomy in Croup.* By M. GUERSANT.

At a meeting of the Society of Practical Medicine of Paris, (*Jan.*

* See an ingenious little work by my distinguished friend Dr. J. K. Mitchell, "On the Cryptogamous Origin of Malarious and Epidemic Fevers."

6*th*, 1853,) M. Guersant observed that tracheotomy involved many difficulties and dangers, and was altogether a more serious proceeding than was generally admitted.

A child had been brought to him with croup, without any false membranes that could be detected, but nevertheless threatened with asphyxia. He (M. Guersant,) had opened the trachea; whether on account of awkwardness on his part, or in consequence of the struggles of the child, blood entered the trachea; the respiration continued embarrassed for four or five hours, and the child died, notwithstanding the efforts made, by suction through a tube, to withdraw the blood which had flowed into the bronchi. The autopsy revealed the existence of false membranes upon the glottis, and a clot in the air-passages. Except for this accident, the case would probably have been successful.

When the operation was done with a bad light, and when the child was very young, and it was impossible to make a free external incision, tracheotomy was very difficult. M. Trousseau's precept, which recommends that the first incision should be extended, and the edges of the wound widely separated, in order that the rings of the trachea may be divided with all the care and celerity possible, was of great importance. Otherwise time would be lost, hæmorrhage would weaken the child, and blood would possibly enter the bronchi, as occurred in his (M. Guersant's) case. M. Guersant desired to report this accident because he considered it extremely desirable that unfortunate as well as successful results in surgery, should be made known.

The following were the results which M. Guersant had obtained in his operations at the *Hôpital des Enfans Malades*, during the last three years:

In 1850,	20	operations,	7 cures.
1851,	30	"	13 "
1852,	59	"	16 "

Gazette des Hôpitaux, March 15th.

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9. *New Treatment of Fistula in Ano.—Spina Bifida.* (Surgical Society of Paris. May 16th, 1853.)

M. Gerdy observed that it was known that when a fistula in ano has its superior orifice very high up, it cannot be operated upon, the surgeon not being able to reach the bottom with the bistoury, without danger of wounding the peritoneum. Or if the operation is performed with proper precautions for avoiding this accident, that is to say, without arriving at the bottom of the fistula, there is a relapse, or rather no cure. This happened in a case witnessed by M. Gerdy; the operation not being complete, there was a return of the disease. The patient being arranged for a second operation, M. Gerdy, after examining the depth of the fistula, did not think it prudent to use the bistoury. The idea occurred to him to use an enterotome, one of the branches of which was introduced into the anus, the other carried into the fistulous

tract by means of an incision making the opening large enough. The two branches, when carried to a sufficient height, were approximated in such a manner as to grasp the recto-fistulous partition through its whole extent. The cure was perfect. M. Gerdy has performed another operation of this sort since, with the same happy results, and thinks the method may be adopted in all deep fistulæ where there is danger of wounding the peritoneum or of producing hæmorrhage.

M. Boinet thought that this process was not exempt from difficulty. Under some circumstances, the operator would have to break up adhesions, or make incisions for the purpose of making room for the blades of the enterotome, as was the fact in the case just reported by M. Gerdy. Two operations were required, one for introducing the blades of the instrument, the other for putting them at work. The sinuosities of the fistulous tract would create another difficulty. M. Boinet considered as preferable, in similar cases, a method which he had resorted to in a subject with multiplied fistulæ and considerable adhesions, viz: the injection of iodine. Three weeks were sufficient for a cure. With this treatment, much more simple than that of M. Gerdy, he had succeeded five times in five cases. There were some precautions necessary to insure the success of the operation. If the operator limited himself to making a pure and simple injection, he would not succeed; it was necessary to let the irritating injection remain for some time in the fistulous tract.

M. Roux remarked, that what M. Gerdy had just said with regard to wounding the peritoneum in fistula in ano, was not imaginary. It was a very rare accident, but it could occur, and the proof of it was that it had happened to himself on one occasion. In operating for a fistula, imperfectly cured by previous treatment, he perceived by the discharge that the peritoneum had been opened. The accident happily was not fatal; the consequent peritonitis was successfully combatted; the cicatrization of the fistula was complete, and the cure perfect.

Spina-Bifida. M. Billoil presented, in the name of M. Monod, a man 30 years of age, with a lumbar spina-bifida. The symptoms which this man presented, were: a certain degree of incontinence of urine, slight spermatorrhœa and incontinence of fœcal matter, when troubled with diarrhœa. There was no inconvenience or muscular weakness in the inferior extremities. M. Guersant considered this fact as very interesting, inasmuch as it supported the opinion of those surgeons who rejected all operations in spina-bifida as useless and dangerous. For his part, he had ceased to operate upon children brought to him with this infirmity. M. Voillemier noticed the importance of examining the anatomical disposition of the tumour. If, said he, the spinal marrow and the nerves remained in the canal, there was more chance of succeeding with an operation; if, on the contrary, which was oftenest the case, the nerves were engaged in the tumour, the operation would not only offer no chance of success, but would be infallibly fatal.—*L' Union Médicale*, No. 66.

OPHTHALMOLOGY.

10. *New Method of operating for Strabismus.* By M. Tavignot.

I. *General principles of the Method.* Suppose, in order to define our meaning, a case of convergent strabismus; there is an inequality in the length of the two lateral recti muscles: the internal is shorter; the external is longer than it should be. What would be done according to the old method? The shorter muscle would be cut, and the antagonist muscle would be left to draw the globe of the eye into its natural position. Were this latter muscle always in its normal condition, we should always have an opposite squint to that which existed primarily.* An examination of muscular paralyses of the eye establish this proposition, and many cases of strabotomy confirm it. Nevertheless, this accident rarely occurs in ocular myotomy, from the sole reason that the muscle opposed to that which is divided, is most commonly half paralyzed, by the tension it has been subjected to, and by the species of inaction to which it has been condemned during a certain period. The cases of real success after Stromeyer's operation are explained by the altogether fortuitous circumstance of the persistent power of the antagonist muscle being equivalent to the degree of deviation which the eye requires in order to assume its normal direction. But who can reckon upon chance? The truth is that it has not been favourable, but far otherwise, to the majority of patients who have hitherto undergone the operation for strabismus.

My method is very different. Instead of lengthening a muscle thought to be too short, it shortens a muscle which is in reality too long. Instead of allowing the eye to oscillate with difficulty between two muscles, one mutilated by division, and the other always remaining more or less relaxed, my method attacks the longer muscle, and not only shortens it sufficiently to make it counteract its antagonist, but also excites its physiological contraction.

II. *Operation.* The longer muscle being laid bare, according to the ordinary rules of strabotomy, the operator proceeds as follows:

First method. A blunt hook, with an eye at its extremity, is introduced beneath the muscle to detach it from the globe of the eye. The hook is then raised, in such a manner that its concavity shall embrace the muscle near its aponeurotic expansion. A silk ligature is then inserted into the eye of the hook, which is then withdrawn, carrying the ligature under the muscle. By passing one end of the thread twice over the other (the surgeon's knot) a simple but very firm knot is obtained. Nothing remains but to tighten this knot, and to cut off one

* Vide Sir Charles Bell, Practical Essays, 1841, in which it is stated that when one of the recti of the sound eye has been accidentally severed, its antagonist has drawn the globe completely to its own side.—[Ed.

end of the ligature. The other end is attached to some portion of the circumference of the orbit.

The first effect of this ligature is to render the lateral fibres of the muscle more central, and consequently to induce shortening of this organ. Its second effect is the development of adhesive inflammation, which not only renders the abnormal juxtaposition of the muscular fibres permanent, but also establishes adhesions between the muscle and the subjacent sclerotic.

As the ligature is not designed to divide the muscle, it should only be temporary. Towards the end of the second or the commencement of the third day it can be easily removed by slight traction made methodically upon the end of the ligature which remains.

This first procedure does not fulfil the indications in every case; it is proper only in deviations of the globe of the eye; cases in which great distortion existed would no doubt be refractory to its action. Accordingly we have devised a more efficacious plan.

Second method. The hook is introduced as before, and the muscle is elevated as much as possible; the ligature is then passed, not beneath the muscle, but beneath the hook, so that it shall surround the muscular loop which has been raised.

Before going farther, the ligature should be tightened temporarily, in order to be assured that the globe of the eye assumes its normal position. If the opposite muscle still preponderates, it is necessary to embrace a greater quantity of muscular tissue in the ligature. If on the contrary the rectification is excessive, it will be necessary to take up a less quantity of muscular tissue.

It is very easy to apply a ligature to a large portion of tissue, but it may appear more difficult to secure a very small quantity in a knot. Nothing is easier, however; it is only requisite, after the loop of muscle is formed with the hook, to seize a portion of this fold with an ordinary forceps, and to pass the ligature under the forceps.

Such in its simplicity, is the temporary ligature, to which I have given the preference after numerous essays, and repeated experiments. It closely resembles the first method. The ligature should never remain more than three days.—*Comptes rendus de l'Académie de Sciences.* May 16th, 1853.

[This operation, so far as the application of a ligature to the recti muscles which have lost their abducting power, is not entirely new. Mr. Wilde in his "Monograph on Entropium and Trichiasis," describes a case of convergent squint successfully treated by an operation.

After the internal rectus was severed, the eye failed to right itself. Having satisfied himself that every fibre of the muscle was divided, Mr. Wilde passed a fine curved sewing needle, armed with a single silk ligature, through the sclerotic end of the external rectus. The eye was now drawn outwards and the end of the ligature was secured over the malar bone by adhesive plaster. Mr. Wilde states that he has employed this means with perfect success in seventeen cases of divergent,

and thirteen of convergent strabismus; and he admits that Dieffenbach had made use of them previously in convergent squint. These facts however detract nothing from the ingenuity of M. Tavignot's method, which we consider worthy of examination on the part of ophthalmic surgeons.—Ed.]

STATISTICS.

11. *On the Number of Practitioners of Medicine in Virginia.*

We extract the following information in regard to the number of medical practitioners in Virginia, from a Report by Dr. C. P. Johnson, which is published in the first volume (1848) of the Transactions of the American Medical Association.

The Committee of which Dr. Johnson was chairman, addressed a circular letter to the clerks of the town and county courts throughout the State, for the purpose of ascertaining the number of persons practicing medicine with the authority of a diploma or license, and the number who practice without any authority whatever. In reply to this circular, the committee received communications from seventy-five towns and counties, from which it appeared that the whole number of medical practitioners in these towns and counties was 972. Of these 678 had received diplomas from regularly constituted medical schools. The remaining 249, more than one-fourth of the whole number, practiced without any authority whatever. Deducting from this number 21, who had made some pretension to the study of medicine, there remained 228 individuals practicing in seventy-five counties, who did not pretend to have devoted one hour to the study of the profession before entering upon its responsible duties.

As the districts from which information was received comprised nearly two-thirds of the whole State, an approximation to the ratio of medical men to the population, might be made by dividing two-thirds of the number of the population, as furnished by the last census, by the whole number of practitioners in seventy-five counties, (two-thirds of the practitioners of the State.) This calculation gave the result that there was one medical practitioner in the State for every 850¾ inhabitants.

According to the report of the First Auditor, the whole number of persons paying the tax imposed on practitioners in medicine was 1517.

The committee contented themselves with presenting the foregoing facts without comment, "satisfied that the glaring defects they exposed in the present system of medical organization and of medical education, would call forth the most earnest efforts of the society to remedy these defects as far as lay in its power."

We republish these statements with the hope that the attention of

the profession may be farther awakened to the deplorable state of things which they present, and to the fact that in the five years which have elapsed since they were first made public, no adequate remedy has been enforced, and that little improvement can be observed.

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12. *Reports of Interments in Richmond, from June 15th to July 15th.* By A. MICHAELS, Esq., Superintendent.

Ages.	Whites.	Colored.
Adults,	22	20
Under 20 years,	37	26
Stillborn,	1	3
	60	49
Males,	27	27
Females,	32	19
Stillborn,	1	3
Stillborn,		4
Unknown cause of death,		48
Various causes mentioned,		57
Total,		109

Causes of Death.	Whites.	Colored.
Consumption,		3
Affection of Brain,	3	
Typhoid Fever,		2
Diarrhœa,	2	
Sun Stroke,	4	
Sudden,	2	
General Decline,	3	2
Measles,	2	
Dropsy,	2	
Cholera Infantum,	17	13
Old Age,	2	
Total,	37	20

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13. *The Weather in Richmond during the month of June.* By D. TURNER, Esq., A. M.

[Being an extract from a meteorological journal kept by Mr. Turner, at his school rooms.]

Years.	BAROMETER.				THERMOMETER.				Inches of Rain.	Rainy Days.	Cloudiness.	Fogs.	Thunder Showers.	Force of Vapour.	Relative Humidity.	Prevailing Winds.
	Mean.	Maximum.	Minimum.	Range.	Mean.	Maximum.	Minimum.	Range.								
1851,	29.896	30.309	29.487	.822	74.9	93.	53.	40.	2.21	8	4.3	0	7	-	-	sw.
1852,	29.837	30.253	29.373	.880	72.6	96.	55.7	40.3	3.42	9	3.5	0	3	12.7	63.7	sw.
1853,	29.932	30.187	29.713	.474	76.2	103.	58.	45.	2.74	4	2.4	1	4	13.1	59.6	sw.

WINDS—OBSERVATIONS.

	N.	NE.	E.	SE.	S.	SW.	W.	NW.	No Winds.
1851,	5	4	4	12	15	29	1	14	6
1852,	5	0	0	9	14	34	7	18	3
1853,	8	9	7	1	12	28	2	13	10

Rains: On the 7th, 1.89 inches; on the 15th, .20; on the 17th, .46; on the 23rd, .19; all being thunder showers.

Hot Days: On the 3rd, 90°; on the 4th, 90°; on the 14th, 91°; on the 20th, 94°; on the 21st, 90°.5; on the 22nd, 94°; on the 23rd, 96°; on the 28th, 94°; on the 29th, 99°; on the 30th, 103°; this last day being hotter than has been known for years; the maximum, last summer, being 97°.

NOTE.—In noting the clouds, 0 signifies clear sky; 10 sky entirely covered. The force of vapour is estimated in millimetres. In estimating the relative humidity of the air, 100 signifies saturation.

THERAPEUTICAL RECORD.

Albuminuria.—M. Rayer has recently employed the common broom (*Cystisus Scoparius*) in the treatment of Bright's Disease, and apparently with benefit. M. Marcé, also reports a case of this affection, in which the remedy seemed to effect a complete cure. The medicine is given in infusion, a half ounce of the dried leaves to a pint of water. This substance was a favourite remedy in anasarca with Mead, and is often used in England as a domestic remedy.—*Revue Médico-Chirurgicale.*

Aneurism.—In the *Dublin Medical Press*, for June 1st, we find two new cases of cure of popliteal aneurism by continued pressure on the femoral artery. In the first the tumour was about the size of the closed fist. Compression was applied on the 5th of March and was continued, the position of the pressure being altered from time to time, until the 24th of April, when all pulsation had ceased.

The second case was more formidable; the tumour was nearly 20 inches in circumference. Pressure had been applied upon two former occasions, and had caused deep sloughs, and an increase in the bulk of the aneurism. After passing through a series of terrible complications, (pneumonia, diarrhœa, phlebitis of the opposite limb) the patient was discharged cured six months after admission.

Ascites.—Dr. Raymond Falot recommends the decoction of digitalis (℥ij. in a quart of water boiled down to a pint) as a fomentation, in cases of ascites complicated with gastro-intestinal irritation. The kidneys are affected as powerfully as when the remedy is administered internally.—*Rev. de Thérap.*

Chapped Nipples.—The *Baume Chiron ou de Lausanne* is highly esteemed in France, as an application to chapped nipples and broken chill-blains. Take of olive oil, ℥x.; Venice turpentine, ℥ij.; yellow

wax, ℥j.; alkanet root, ℥ss.; boil together, strain, and add balsam of Peru, ℥ijss.; camphor, gr. x.; stir constantly until cold.—*Formulaire magistral.*

Chloroform in Colic.—Dr. Aran, of Paris, has found chloroform in doses of from ten to twenty drops a most excellent remedy in colic, particularly in lead colic. He asserts that 150 drops may be safely administered in twenty-four hours, as chloroform is quickly eliminated from the system.

Chordee.—Dr. Doringer reports (Med. central Zeitung) a curious application of collodion. A young man, affected with gonorrhœa for the third time, suffered with such indomitable and painful erections, that he could scarcely remain an hour in bed. After employing camphor and narcotics in vain, M. Doringer ordered cold fomentations, and as soon as the penis was relaxed, he covered the whole surface with a thick layer of collodion. The plan succeeded, and the amelioration was evidently due to the collodion; for when this was removed, the erections returned, and were only overcome by a renewal of the application.—*Rev. Méd. de Cayol.*

Colchicum in the Cerebral Symptoms of Scarlatina.—Drs. Babington and Hughes, after long experience, are convinced that when the brain symptoms, which are so generally fatal, supervene during the convalescence of children from scarlet fever, there is no remedy more efficacious than colchicum.

Croup.—M. Trousseau praises the sulphate of copper as an emetic in croup, as recommended by Beringnier. This emetic appears to influence the pharynx more than the stomach, and the efforts it induces often detach the false membranes from the air-passages. M. Beringnier gives 2 or 3 grains, but M. Trousseau gives 10 grains, in two doses.—*Gaz. des Hôpitaux.*

Of Cupping, in Pneumonia of Young Children.—In a long article which M. Hervieux has published in *l' Union Médicale* under this head, he arrives at the following conclusions:

A large majority of authors advise the practice of local depletion in the pneumonia of infancy. Cupping is the best method of fulfilling this indication. It is preferable to venesection because it involves no danger of wounding a vessel, or of prostrating the patient; and it has the advantage over leeching of never causing serious hæmorrhage. It is perfectly innocuous, and enables the physician to abstract with mathematical accuracy the quantity of blood he desires.

Cups exert a revulsive action like blisters, without causing the ill effects of the latter. They are sufficient of themselves to jugulate primary lobular pneumonia, whether general or partial, and to induce resolution in primary lobar pneumonia. The secondary forms of pneumonia also are influenced in a salutary manner by cupping, since more or less complete resolution of pneumonia, complicating measles, whooping-cough, small-pox, and enteritis, has been obtained by this method.

Dysmenorrhœa.—In Germany the bi-borate of soda is used in conjunction with ergot, to produce uterine contraction, and alone to facilitate the excretion of the menstrual fluid. Dr. Bennett, of London, regards it as an important agent in fulfilling the latter indication, and employs the following formula in many cases of dysmenorrhœa: ℞. Magnes. carbon. gr. v.; pulveris rhei. gr. ij.; sodæ biboratis, gr. x.; infusi calumb. ℥j.; ter die sumend.—(*Med. Times and Gazette.*)

Erysipelas.—Dr. Balfour reports (*Edin. Monthly Jour. Med.*) a number of cases of erysipelas cured by tincture of chloride of iron. Its curative action seems to be exerted upon the capillaries, and is manifested when the organism is saturated with iron, a condition which should be induced as promptly as possible. Small doses suffice to diminish the pain and to moderate the action of the heart; the medicine seems to act also upon the kidneys, and to correct the secretions to a certain extent, frequently cleansing the tongue as well as a purgative.

Erysipelas.—We learn (*Med. Gaz. of Russia*) that Dr. Spoerer has reduced the mortality of erysipelas almost to nothing, by constantly treating this disease by camphor, which he regards as its specific. The additional treatment consists in baths and lotions of warm water; a purgative in case of gastro-intestinal disorder; and a little opium if the patient is troubled with wakefulness. A sweat often announces the termination of the disease; but nothing is so favourable, as regards the prognosis, as a moistness of the tongue. Dr. Spoerer invokes statistics in support of his assertions. During seven years among 1400 patients with erysipelas at St. Mary's Hospital of St. Petersburg, the mortality of the disease, treated by the ordinary methods, was one in seven; during the last three years, while camphor has been employed, not more than one in sixty has been lost.—*Revue de Thérapeutique.*

Humulus Lupulus as an Anti-periodic.—Dr. Godberry, of Mississippi, considers the humulus lupulus only second to quinia in anti-periodic powers, and he has checked intermittent fever through its agency after failing with quinia. He administers the remedy in infusion (℥j. to Oj.) or as a tincture.—*Western Journal of Medicine.*

Iodized Oil.—℞. Iodinii, gr. xxx.; olei amygdalæ, ℔. ij. Triturate the iodine with a small quantity of oil in a porcelain mortar; when it is well divided, add the rest of the oil: the solution being complete, apply gentle heat. The colour gradually diminishes and the process is suspended, and the oil allowed to stand for eight hours. This formula, taken from the *Repertoire de Pharmacie* (Vol. ix., p. 31,) resembles that of M. Personne, recommended by the Academy of Medicine as affording an excellent substitute for cod liver oil. It is readily assimilated and patients take it without disgust.

Knock-Knees.—Dr. Mayer, of the orthopædic hospital at Wurtzburg, performed, August 1851, a novel operation for this deformity. A boy of fifteen, strong and healthy, was found to have the right leg devia-

ting seven inches, and the left about eight, from the direction of the corresponding thigh. Chloroform was given, and Dr. Mayer laid bare the tibia three quarters of an inch below the insertion of the ligamentum patellæ. A wedge of bone was then removed by the saw, the base of the wedge being inwards. About a line and a half of the thickness of the tibia was left intact. Owing to the flexibility of this isthmus of bone, and the mobility of the fibula, the cut surfaces of bone were readily brought in apposition. The external wound healed in four days, and the bone united perfectly in twenty-three days. On the 3d of October the other leg was operated on with equal success. Not a word is said of Dr. John Rhea Barton's operation, which suggested, no doubt, this method.

Lupuliu (the Alkaloid of Hops) as an Anaphrodisiac.—M. Debout, editor of the Bulletin de Thérapeutique, has found lupuliu extremely efficacious in priapism, chordee and spermattorrhœa. The dose is 15 or 30 grains of the powder, triturated with white sugar. MM. Ricord and Puche have administered three drachms without any unpleasant effects.

Ophthalmia.—Dr. J. Paul announces (*Ann. d'occulist.*) that he has used with advantage in chronic inflammations of the eye, injections of a solution of nitrate of silver (℈j. ad ℥ij.) into the nostrils. This powerful derivation upon the Schneiderian membrane is analogous to the cauterizations of the nostril with the solid stick of caustic, which have been recommended particularly in scrofulous ophthalmia by MM. Morand (de Tours) and Tavignot.

Paraphimosis.—Dr. Rau mentions in *Casper's Wochenschrift*, six cases of this affection which he has treated among infants in the last three years. He was not able to reduce the strangulation immediately in any case, but he succeeded easily in a few hours, by applying mercurial ointment and extract of aconite or belladonna.

Strychnia in Impaired Spinal Energy.—Dr. Marshall Hall believes that this condition is due to causes of nervous exhaustion, such as excessive study, muscular effort, and sexual indulgence, and has found strychnia useful in correcting it. He gives minute doses thrice daily, for many months, in the midst of meals. The following formula may be used: ℞. strychniæ acetatis, gr. j; acidi acetici, gtt. xv; alchoholis, ʒ ij; aquæ destillatæ, ʒ vj. M. Dose, ten drops, containing one fiftieth of a grain. The remedy acts on the spinal marrow, and is counter-indicated in cases of *irritation* of the nervous centre and of spasm.—*Lancet.*

Tic Douloureux.—Mr. Beaumont recommends the following combination in this distressing affection: ℞. Ferri potassio-tartratis, ℈ ij; vini opii, gtt. lxxx; aquæ cinnamomi ℥ viij. M. Fiat mistura. Three tablespoonfuls thrice daily.—*Association Medical Journal.*

Ulcers.—The obstinacy with which ulcers of the leg refuse to heal

in spite of the various methods of exciting them to do so, is often a source of annoyance to the surgeon. Mr. Gay, of the Royal Free Hospital, London, has lately employed a new practice in these cases, which was suggested to him by the mode in which fissures of the soft palate close. It consists in making an incision of two or three inches in length through the sound skin and faxia adjoining the edge of the ulcer, parallel to the long axis of the leg. Mr. Gay supposes that these sores heal partly by the addition of new tissue to the edge, and partly by traction upon the surrounding skin; and that the healing proceeds as long as the traction is responded to by the adjacent parts, but ceases as soon as the maximum of yielding has been attained. The practice of favouring this contraction by lateral incisions appears to be founded upon correct analogy, and has induced rapid cicatrization in those cases in which it has been employed.—*Lancet.*

Warts.—Dr. Peez, of Wiesbaden, confirms the statement, made by several German practitioners, of the rapidly curative agency of the carbonate of magnesia in warts.—*Rev. Méd. de Cayol.*

EDITORIAL AND MISCELLANEOUS.

While most of the States of the Union have passed laws of some kind in relation to the practice of physic, even though they may have subsequently rescinded them, the subject has not been deemed of sufficient importance in Virginia to require any legislative action at all, and the admirer of our institutions is subjected to the mortifying reflection, that even the most despotic governments take better care of the health of the community, than the rulers of our own free and prosperous State.

At the present time any one who pleases may practice medicine in Virginia and no one has a right to interfere with him. Our boasted liberty has degenerated into license, and the title of Physician, honourable in itself, is assumed not only by the graduates of every paltry school, by the majority of dentists, and by some apothecaries, but every quack who pares corns, or invents a new nostrum dubs himself a Doctor, for the purpose of inducing the public to confound him with the legitimate and educated practitioner.

This chaotic amalgamation of various classes under one honourable

title, which is the result of the practical workings of our theories of enlarged individual liberty, is certainly deplorable; and the remoteness of the prospect of any remedy, is more disheartening still. So many impostors have already become incorporated with the medical body; so many covetous, unprincipled men who desire to perpetuate the present state of things for private ends, are numbered in our ranks, that those who have received a liberal education, and have had that education tested by an examination, and have acted in accordance with honourable principles, are outvoted by empirics and pretenders.

A large number of physicians, apparently convinced of the impossibility of repressing abuses, are satisfied in performing their individual duties, and manifest a complete apathy in regard to all measures for the elevation of the professional standard.

Another class, indignant at the success attained by impostors, are impatient even of the slight restraints which medical associations have attempted to enforce, and desire to combat quackery with its own weapons. A painful instance of this is exhibited in the conduct of several distinguished physicians and surgeons of New England, whose advertisements of their superior knowledge of special branches of our science, and of their willingness to afford gratuitous advice, have recently attracted much comment.

Many of the profession, in Virginia, are actively engaged in the political arena. These gentlemen are village oracles, or the luminaries of country neighborhoods, and they refuse their adhesion to any measures calculated to impair their usefulness and popularity in those capacities. One of them, a member of the late legislature, was, we are told, one of the most active opponents of the Registration Bill.

Others decline to co-operate in the work of reform because they are opposed to "centralization" (that is to plan, organization, system), as if the very existence of society did not require some centralization.

Another disaffected class consists of individuals who are opposed to particular projects which are judged expedient by the friends of reform, and who refuse to sacrifice their private prejudices to the common weal.

The consequence of this state of things, which, to the extent of our knowledge, we have endeavoured truthfully to depict, has been that the profession in Virginia, though for many years it has embraced a large proportion of the talent of the State, has done less, as a body, than almost any other in the work of education, and organization, and

the advancement of medical science. A large number of eminent men, the most illustrious of whom, alas! we mourn for now, have gone to another field where earnest scientific workers were sought after, literally exiled because only *practical* pursuits were encouraged at home. Though for a different reason it might be graven on their tombs as on Dante's,

*Hic claudor * * * patriis extorris ab oris.*

While everywhere else the number of self-styled "practical" men is decreasing, and giving place to a class with a better knowledge of what is really and truly practical; which perceives that an arrogant contempt of the theoretical is compatible with the indulgence of the crudest theories, and that "the assumption of the title of practical, is only a stroke of policy to hide a profound ignorance of the literature and science of the profession," the physicians of Virginia have generally remained indifferent to those new methods of research, by which medicine has made such vast and secure strides during the last few years. We have taken no part in those applications of microscopic and chemical analysis to physiology and medicine, by means of which obscure phenomena have been elucidated, and general laws of nutrition and development have been laid down. We have not assisted in the investigation of the morbid changes in the fluids, and the organic and functional alterations with which they are related, or in the study of vital forces, from which fixed principles in pathology will ultimately arise.

Are we always to remain thus? Is there no remedy? Is none to be found in an efficient system of medical organization and education? The benefit of a good medical school is not confined to its disciples. It reacts upon the profession and the public at large. The old men feel an honourable anxiety that their attainments may not be discovered to be less elevated than the station they occupy, and that they shall not be left behind in the march of improvement. The young men are stimulated by a laudable ambition of becoming worthy of succeeding those whose eminent services have been rewarded by posts of honour, and the public is taught the difference between educated physicians and those nefarious quacks who ignore the lessons of experience, and, aiming at nothing but the accumulation of wealth, by the plunder of their victims, bring ridicule on the profession, and reflect disgrace on the age and country in which they live.

Good medical schools can never be numerous. Competition will

never do here; it quickly ceases to be a scientific rivalry and becomes a mercantile one. We are opposed to the multiplication of schools, and believe that those feeble institutions, which have betrayed their inability for good, should be treated by the profession with as little mercy as some Indian tribes are said to evince towards their feeble or deformed offspring. Three medical faculties are found sufficient for the whole empire of France, surely one in each State may adequately respond to the wants of this country.*

A college of medicine, on a broad and liberal basis, endowed by the State, and cordially supported by the profession at large, is what we earnestly desire, and the present time appears very favourable for the accomplishment of this end. The Trustees and the Faculty of the medical school in this city are engaged in a controversy which will probably lead to a separation of the school from the institution with which it has been connected. We do not intend to enter into the merits of this controversy, which involves only the compact between the trustees and professors, and which has been fully discussed in the daily press; we are arguing not on what *has been* but on what *should be* the constitution of a medical college receiving the support of the profession throughout the State.†

We may be allowed to express the hope that this separation may take place, and that the professors of the college—whether a private association, as they affirm, or beneficiaries of the State, as their opponents declare,—will solicit a new charter of the legislature; not for a private institution, which is as obnoxious as a sectarian one, but for a "Medical College of Virginia," to be governed by a board of trustees composed of the most respected and disinterested physicians throughout

* At present the annual number of medical graduates in this country is five times as great (one in every 13,000 of the population) as it is in France, where the profession is already crowded and under-paid. Evidently, then, the supply is far greater than is demanded by the exigencies of the people.

† To avoid misunderstanding it may be well to state that we by no means agree with the party of physicians who hope to attain the desirable objects to which we are referring by transferring the power of the appointment of professors from the faculty, which has hitherto exercised it, to a sectarian and self-constituted board of trustees, guiltless of any knowledge of medical subjects. We cannot understand how this self-elected corporation is a more proper guardian of the funds which the State appropriates for the furtherance of medical education, than any self-elected board of physicians. No tax-payer, physician or otherwise, that we are aware of, has, in that capacity, a voice in the election of the trustees of Hampden Sidney College.

the State, appointed by the Executive, or by we care not whom, provided their number is large enough.

We feel confident that if they pursue this course they will be supported by the profession. The medical community will insist on the re-election of men who have taken such liberal ground. The combined influence of the profession will procure an endowment which will make the faculty independent of students.

At present it is the interest of the faculty to procure students for their institution; while it is their duty to exercise a close supervision over candidates for the doctorate, in order that none but qualified persons shall enter the profession. Now we are opposed to placing men in positions in which duties and interests so clearly clash. The evil would be remedied by the scheme proposed, and the faculty could establish the highest standard of qualifications without having the fear of empty benches before their eyes. Harmonious action once obtained a State hospital might be procured, with those facilities for clinical teaching without which every system of medical instruction must be defective. In short we should have a "Medical College of Virginia."

An examining and licensing board would be an essential part of this plan; in order that the doors of the profession should be closed against those who were unable to conform to the high standard of requirements at the State Medical School. From what a different class, under such circumstances, would the medical ranks be recruited!

We do not wish to talk Utopian. We know the extreme difficulty, under our system of government, of obtaining legislative protection and aid for any class, and especially for a class without political influence. Yet some action must be taken, and the present is the proper time for it. It is the indubitable right of the mass of the profession to dictate on this subject, and we conceive it to be the duty of every humble member of it to make his voice and opinion heard.

DEATH OF DR. CHAPMAN.

Another great man, whose memory grateful Science will perpetuate, has passed away. The world, with its notions of the heroic derived from Alison or Headley, would smile were we to associate him with the Wellingtons and Websters, whose deaths the past year has witnessed. With its habitual injustice to its greatest benefactors, it would

refuse pre-eminence to one whose triumphs were noiseless. With its unphilosophical and even unreasonable system of rewards, which has covered London with monuments to Wellington, and left the stranger in her streets to look in vain for the memorial of a Jenner, it would enquire what were the achievements for which this man claimed a place in the Temple of Fame.

Yet it is pleasant to reflect that time is a great friend to the illustrious votaries of science, and that posterity invariably places them far above those whose exploits were rewarded in their own day. It is a perishable stuff on which your conqueror hammers with such violence; the kind earth soon shrouds up his bloody foot-prints, and the tumult which he created, which promised to be perennial, dies away in the next age into insignificance and oblivion. In England, says Voltaire, we think one moment of Cromwell, we quite forget the wars of the White Rose, but we study Newton whole years, and are not surprised to read upon his epitaph that he was the glory of the human race.

Dr. Chapman stood confessedly at the head of the American medical profession. When the National Association of Physicians was formed, seven years ago, he was called to preside over it. The exquisite address which he delivered extemporaneously on this occasion is on record. It may be truly called "the last sigh of his expiring eloquence."

We leave it to abler hands to describe this man—to speak of his eminence as a writer, practitioner, teacher; of the fascination of his manners, and of the charm of his eloquence; of his wit, humour, kindly impulses, and noble generosity.

A graduate of Edinburgh, where Brougham and Jeffries were his intimates; the brightest ornament of the first medical school of the country; a brilliant editor, an accomplished author, a revered teacher, a profound physician, his life was one series of successes.

He expired on the second of July, at an advanced age. The evening of his days was tranquil and happy, and solaced by the affectionate respect of innumerable friends. He bequeaths to the profession the glory of his illustrious reputation; to all a model of a long life well employed.

Hic jacet, hoc saxum non coluisse nefas.

RESPONSE

BY OLIVER WENDELL HOLMES, M. D.,

To the following Toast, proposed at the Entertainment given to the American Medical Association, by the Physicians of the City of New York, at Metropolitan Hall, on the 5th of May, 1853:

TOAST.—"The Union of Science and Literature—A happy marriage, the fruits of which are nowhere seen to better advantage than in our American *Holmes*."

I hold a letter in my hand—
A flattering letter—more's the pity—
By some contriving junto planned,
And signed *per order of Committee;*
It touches every tenderest spot—
My patriotic predilections—
My well known—something—don't ask what—
My poor old songs—my kind affections:—

They make a feast on Thursday next,
And hope to make the feasters merry—
They own they're something more perplext
For poets than for port and sherry—
They want the men of—(word torn out);
Our friends will come with anxious faces,
(To see our blankets off, no doubt,
And trot us out and show our paces).

They hint that papers by the score
Are rather musty kind of rations:
They don't exactly mean a bore,
But only trying to the patience;
That such as—you know who I mean—
Distinguished for their—what d'ye call 'em?—
Should bring the dews of Hippocrene
To sprinkle on the faces solemn.

—The same old story; that's the chaff
To catch the birds that sing the ditties;
Upon my soul, it makes me laugh
To read these letters from Committees!

They're all *so* loving and *so* fair—
All for *your* sake such kind compunction—
'Twould save your carriage half its wear
To grease the wheels with such an unction!

Why, who am I, to lift me here
And beg such learned folk to listen—
To ask a smile, or coax a tear
Beneath these stoic lids to glisten?
—As well might some arterial thread
Ask the whole frame to feel it gushing,
While throbbing fierce from heel to head
The vast aortic tide was rushing.

As well some hair-like nerve might strain
To set its special streamlet going,
While through the myriad-channeled brain
The burning flood of thought was flowing—
Or trembling fibre strive to keep
The springing haunches gathered shorter,
While the scourged racer, leap on leap,
Was stretching through the last hot quarter!

Ah me! you take the bud that came
Self-sown in your poor garden's borders,
And hand it to the stately dame
That florists breed for, all she orders;
She thanks you—it was kindly meant—
(*A pale affair not worth the keeping,*—)
Good morning;—and your bud is sent
To join the tea leaves used for sweeping.

Not always so, kind hearts and true,—
For such I know are round me beating—
Is not the bud I offer you,—
Fresh gathered for the hour of meeting—
Pale though its outer leaves may be,
Rose-red in all the inner petals,
Where the warm life we cannot see—
The life of love that gave it, settles?

We meet from regions far away
Like rills from distant mountains streaming:
The sun is on Francisco's bay,
O'er Chesapeake the lighthouse gleaming:

While summer skirts the still bayou
With every leaf that makes it brighter,
Monadnock sees the sky grow blue
And clasps his crystal bracelet tighter.

Yet Nature bears the self-same heart
Beneath her russet-mantled bosom,
As where, with burning lips apart,
She breathes, and white magnolias blossom:
Ay! many a cheek is kindled here
With morning's fire as richly laden
As ever Sultan of Cachemire
Kissed from a sun-enameled maiden!

I give you *Home!* its crossing lines
United in one golden suture,
And showing every day that shines
The present growing to the future,—
A flag that bears *a hundred* stars,
In one bright ring, with love for centre,
Fenced round with white and crimson bars,
No prowling treason dares to enter!

O brothers, home may be a word
To make affection's living treasure—
The wave an angel might have stirred—
A stagnant pool of selfish pleasure;
HOME! It is where the day star springs
And where the evening sun reposes,
Where'er the eagle spreads his wings
From northern pines to southern roses!

The Hospitals of Paris.

Medical men are naturally interested in the admirable institutions for the relief of suffering humanity, which have been founded by private and public munificence in Europe, and in France, on a greater scale than elsewhere, and will perhaps excuse a somewhat extended description of a few of the more noted establishments of this character.

In Paris there are hospitals devoted to every age, and sex, and disease.* The *Maison d'accouchement* receives women about to become mothers; the *Hospice des Enfants-Trouvés* receives newly born children:

* The facts here related have been derived partly from a late number of the *Moniteur*, partly from Sachaille's Medical Biography, and partly from personal observation.

and, if they are abandoned, they are adopted by the state until they are twenty-one years of age. The hospital *des Enfants-Malades* offers an asylum for children from two to fifteen years of age, of both sexes. There are numerous general hospitals for adults, and special hospitals for those whose diseases require a peculiar treatment. Thus, St. Louis is chiefly devoted to skin-diseases; the Lourcine, to female venereal patients; the *Hôpital du Midi*, to male venereal patients. The Salpètrière and the Bicêtre are consecrated to the treatment of insanity. Old age has its male and female asylum. There is an hospital for incurable men, and another for incurable women. The Hospital des Quinze-Vingts contains 300 blind adults, with their families: the National Blind Asylum, 860 blind children.

These institutions, only a few of which we have specified, are all governed by the administration of public charity, which is composed of twenty-six members, and a director-general appointed by the minister of the interior. The director is assisted, in the immense task of administering the public charity of Paris, by chiefs of bureaux, and a multitude of clerks. He controls the twelve million three hundred thousand francs, which is the annual revenue which the government allots to the civil hospitals.

The administration receives annually upwards of 80,000 patients into the hospitals; provides for 4600 foundlings at the hospital, and 15,000 in the country; and succours over 30,000 poor families.

The deaths at the hospitals show that the mortality of classes leading a sedentary life is much greater than that of classes working in the open air; and, 2dly, that it is in an inverse ratio to the amount of salary. Misery, therefore, not only imposes privations, but it shortens life.

The *Bureau central*, near Nôtre-Dame, regulates the admission of patients at the hospitals. The physicians and surgeons composing this bureau, are appointed by *concours*, and the medical staffs of the hospitals are recruited from among them. Patients apply at this bureau, are carefully examined, and sent to the most suitable hospital.

La Pitie. By an edict of 1612, Louis XIII. decreed that the mendicants of the capital should be confined, since their number disturbed the public tranquility. Many houses were bought for this purpose, and particularly that called *Jeu-de-Paume de la Trinité*, which received the name of Pitié, because its chapel was under the invocation of Nôtre-Dame-de-Pitié. In 1657, the Salpêtriére having been assigned to infirm mendicants, the children of these last, and orphans of both sexes, were placed in La Pitié; the girls were taught to read, write, and sew. Subsequently foundlings and orphans indiscriminately found there an asylum, and were taught some trade. During the revolution, these poor children were called *elèves de la patrie!* In 1809 they were transferred to the Faubourg St. Antoine, and La Pitié became a general hospital.

At that date it contained but 200 beds; in 1851 it had 624. During that year the number of patients who entered the hospital was 10,201, of whom 826 died. The mortality is 1 in 12.27. The pa-

tients remain in the hospital 21 days on an average. The daily expense of each patient is 32 cents. The total expense is $74,132.

The service of this hospital is composed of five physicians: MM. Clement, Gendrin, Nonat, Valleix and Grisolle; two surgeons: MM. Laugier and Michon; a pharmacien, M. Guiart; five medical and six surgical internes; twenty-two sisters of the order of St. Martha, and forty-six nurses. Two almoners are specially attached to it.

M. Clement was adjunct.professor with Portal in the anatomical course which the latter delivered at the Jardin-des-Plantes. He has published several memoirs on physiology, and a dissertation on cataract.

M. Gendrin has given clinical instruction in medicine for many years, and has been a most industrious author. His history of inflammations is often referred to by writers on that subject; it has been translated into German. His memoir upon continued fevers was rewarded by a prize of 1500 francs; and his various papers in the transactions of the Society of Emulation, form a valuable portion of those volumes. M. Gendrin has always failed in the *concours* for the professorships at the Medical School, notwithstanding his learning and ability. He is very ill-natured and is not liked by his brethren, and his insuccess is attributed to their want of sympathy. In spite of the imperfections in his disposition, M. Gendin is an excellent teacher, and a scientific physician. He is at present publishing his clinical lessons on hysteria, an abstract of which we shall soon present to our readers.

M. Nonat is an *aggregé*, or assistant professor, of the Medical Faculty. He has figured honourably in several concours.

M. Valleix has advanced rapidly in his career. Immediately after graduating in 1835, he published a work upon the diseases of new born children, which abounds in valuable observations, collected during his residence, as interne, at the Foundling Hospital. In 1844 M. Valleix received a prize of 1500 francs, from the Academy of Medicine, for a memoir upon œdema of the glottis, a disease whose diagnosis was until then very obscure. The works by which he is best known are his treatise upon the neuralgiæ and his *Guide du médecin practicien*. In the former he has studied with care and detail the painful affections of the nerves; he has completed the history of those already known, and has described several species which, though frequent, were little understood. The latter work is a summary of medical pathology and therapeutics, and forms one of the best systematic treatises extant. It first appeared in ten volumes, but the second edition is contained in five. We can refer those desirous of learning the French views on practical medicine to no better work. M. Valleix has served at St. Maguerite, Beaujon, and other hospitals, before his present appointment. His wards are much frequented by discriminating foreign students.

Dr. Grisolle is probably the most distinguished member of the medical staff of La Pitié. He is a member of the Academy of Medicine, and has recently succeeded Trousseau in the professorship of

Materia Medica and Therapeutics. His monograph on pneumonia is esteemed the best treatise on the subject, and obtained a prize from the Institute as the most valuable practical work published during the year. His treatise on the practice of medicine has gone through many editions, and is as fascinating as Watson's Lectures.

Of the surgeons of this hospital, M. Laugier is the oldest and most distinguished. He is clinical professor of surgery to the Faculty, member of the Academy of Medicine, officer of the Legion of Honour, etc. He was one of the surgeons of Louis Phillippe. M. Laugier is not a very interesting lecturer, but his graceful and benevolent manners, his noble appearance, and the modesty, which his success and his eminent services to humanity and the art which he cultivates, have never altered, render him a favorite with all who visit his wards. M. Laugier has modified the immovable apparatus, or dextrine bandage of Scutin and Velpeau, by substituting strips of coarse brown paper and paste for the bandage with dextrine or starch employed by those surgeons. We have seen excellent cures of compound fractures of the tibia obtained with this method by M. Laugier. M. Laugier is a skilful operator, and he applies a bandage with greater dexterity than any one we have ever seen. He has published many memoirs, and many of the articles in the Dictionary in Thirty Volumes are from his pen.

M. Michon is not a clinical professor, but his remarks by the bedside are full of interest. He is extremely affable, and his visits are always well attended. M. Michon enjoys a large surgical practice, and an excellent reputation.

The 624 beds at La Pitié are arranged in 22 wards. As in almost all of the Parisian hospitals, the beds are of iron, with white curtains, a straw bed, two mattresses, two blankets and a coverlid, and an *édredon* (a large down pillow used in Europe in place of a "comforter") for those patients who require it.

The laundry is well ordered at La Pitié; the washing is done by the poor idiots of La Salpétriere, who receive the moderate salary of four cents per diem for this labour. The sisters display a very pardonable coquetry in the arrangement of the linen. The baths are furnished with every convenience. The promenades are delightful, particularly those for the women, which are sanded and shaded by fine trees.

The chapel contains five pictures by Lecerf, and a marble table exquisitely chiseled. In the court-yard stands an old locust tree bearing the inscription: "*Arbre de la liberté, planté* 1793, *par les enfans de la patrie.*"

Opposite the hospital is the *fontaine Cuvier.* The ornaments of this monument are very elaborate. It was planned by M. Vigoureux, and is dedicated to the illustrious savant, whose name is thus inscribed over the entablature, "*A Georges Cuvier.*"

La Pitié is admirably situated; the windows of many of its wards look out on the Jardin-des-Plantes, and the others upon a vast court-yard; it renders immense services to the population of the quarter, the poorest in the capital.

[*To be Continued.*]

A New Anæsthetic.

A communication of great importance was presented to the Medical Society of London at its meeting of the 29th of May, announcing nothing less than the discovery of an anæsthetic equal in efficacy to chloroform and ether, but less dangerous than ether of them.

It appears that the vapours of burning lycoperdon proteus (common puff-ball) are employed in England to stupefy bees, when it is desired to remove the contents of the hive. This fact suggested to Mr. Benj. W. Richardson, the probability that these vapours might be advantageously substituted for the anæsthetics commonly in use.

Numerous experiments were made upon animals and upon man, and it was found that effects precisely analogous to etherization were rapidly induced. A large tumour was removed from the abdomen of a dog, which had been rendered insensible by this means. Anæsthesia was prolonged for two hours in some cases, and yet although the pulsations of the heart were scarcely perceptible, and the insensibility so complete that the animal was apparently dead, yet it was always easy to revive him as soon as the inhalation of the smoke of the fungus was discontinued.

From some cause, our files of English journals have not yet come to hand, and we are unable to present the full details of Mr. Richardson's discovery.

The keepers of neat stock in Europe have sustained numerous and disastrous losses during the last ten years, in consequence of the ravages of pleuro-pneumonia among the cattle. Bleeding is found to be worse than useless, and great efforts have been made towards the discovery of some method of prevention or cure.

Dr. Williams, a Belgian physician, has announced that he has discovered a means of greatly reducing the mortality, if not of entirely arresting its progress, by inoculating healthy animals with matter from the lungs of one that has died of the disease. Extensive experiments have been made to test the reality of the remedy. Dr. Simonds of the English Veterinary College, has visited Belgium for the purpose of investigating the supposed discovery. The experiments he witnessed were not altogether satisfactory, and the statements he heard were contradictory.

MEDICAL NEWS AND ITEMS.

Registration of Marriages, Births and Deaths.—The law on this subject which was passed by the General Assembly of Virginia, April 11th, 1853, went into effect on the first day of last July. The duty of registering is assigned to the clerks of county and corporation courts, who are to receive their information from the commissioners of the revenue, and from persons celebrating marriages, and are to forward to the auditor a copy of their annual register. The auditor will make an abstract of these registers, in a biennial report to the legislature.

The commissioners of the revenue are to ascertain the births and deaths in their districts, from heads of families, from physicians, and coroners.

Ministers and all persons celebrating marriages, are at once to record every marriage between white persons, and are to return a certificate thereof to the clerk of the county or corporation, in which the marriage was solemnized.

We copy the provisions of the Act, so far as they relate to the duties of physicians:

"Every physician or surgeon shall, in a book to be kept by him, make a record at once of the death of every person dying in this State, upon whom he has attended at the time of such death; setting out as far as practicable, the circumstances herein required to be recorded by a commissioner respecting deaths. He shall give to the commissioner of the revenue, whenever called on by him for that purpose, annually, a copy of such record, so far as the same relates to death in such commissioner's district."

The "circumstances" referred to, are thus set forth:

"Every commissioner shall in like manner record in a book kept by him for the purpose, the place and date of every death in his district during the year ending on the preceding thirty-first of December: the full name, sex, age, condition (whether married or not), and colour of the deceased; and if coloured, whether free or slave; also the occupation, if any, of the deceased, and his or her place of birth, the name of his or her parents, and (if the deceased was married) the name of the husband or wife; and if the deceased was a slave, the name of the owner, also the disease or cause of the death, so far as such facts can be ascertained."

AMERICAN MEDICAL ASSOCIATION.

At a meeting of the Association, held at New York, in May, 1853, the undersigned were appointed a committee to receive voluntary communications on medical subjects, and to award two prizes of $100 each, to the authors of the best two essays.

Each communication must be accompanied by a sealed packet, containing the name of the author, which will be opened only in the case of the successful competitors. Unsuccessful communications will be returned on application after June 1st, 1854.

Communications must be addressed, *post-paid*, to the chairman of the com-

mittee, Dr. Charles A. Pope, 123 Locust st., St. Louis, Mo., on or before the 30th of March, 1854.

Charles A. Pope, M. D., T. Reyburn, M. D., J. S. Moore, M. D., J. B. Johnson, M. D., A. Litton, M. D.

CHARLES A. POPE, M. D., *Chairman.*

☞ The Medical Press of the U. S. is requested to copy the above notice.

We are happy to learn that a petition, recommending Dr. BENNETT DOWLER for a Foreign Consulship, was signed by all the members of the City Council, in their session night before last. Few persons will go before the President for an office with such high recommendations as have been given to this distinguished savant, whose scientific researches have reflected so much credit upon our city, and so much honour upon himself.—*New Orleans Delta.*

Dr. ARTHUR P. HAYNE has received the appointment of Special Examiner of Drugs, Chemicals, etc., at the port of Charleston, South Carolina.

Dr. MASSIE, of Texas, is engaged in writing a systematic treatise on the theory and practice of medicine, embodying the history and peculiar characters of Southern epidemic and endemic diseases, and also their pathology and therapeutics. This task is assumed at the solicitation of a large number of practitioners who are well acquainted with Dr. Massie's high qualifications. The work will be brought out in the course of the next six months. The price is fixed at five dollars a copy. We look forward with unusual interest to this Southern contribution to medical science.

Medical Coroner.—The importance, in fact the necessity of appointing medical men as coroners, has repeatedly been made the subject of remark in this journal. A petition, signed chiefly by physicians, was recently presented to the Hon. Noah Martin, M. D., Governor of the State, for the appointment of Dr. Gage, of Concord, as coroner for Merrimack; and it gives us pleasure to state that the appointment was at once made. Would not the physicians in the other counties do well to select some one of their number for the same office, and petition for his appointment. It may be a matter of great importance, and there can be no better time for such applications than the present, when a gentleman fills the gubernatorial chair, to whom the honour, dignity and usefulness of the medical profession are most dear.—*New Hampshire Journal of Medicine.*

Baron Liebig.—A committee with Professor Graham at its head, composed of many of the scientific celebrities of the day, has been organized to present an honorary testimonial to Professor Liebig, on the occasion of his retirement from the University of Giessen, and his appointment at Munich.

Professor Syme.—This bellicose gentleman has received a verdict in his favour in an action brought against him by Dr. F. Muller, who, by some extraordinary perversion of judgment, had taken to himself some severe remarks which the defendant intended for Mr. Lizars.

Discovery of Anæsthetic Agents.—At a recent meeting of the Medical Society of Georgia, a resolution was adopted unanimously to the effect that, in the opinon of the Society, Dr. C. W. Long, of Athens, Georgia, was the first person

who used ether as an anæsthetic agent in surgical operations. Dr. Long's claims to priority will be presented to the American Medical Association.

Reproduction of Leeches.—M. Bouriceau announces to the Institute of France (*Compte-rendu*, May 16th), that he has succeeded in inducing leeches to reproduce at the end of their second year, instead of at the usual age of eight or ten years.

CHARLES CALDWELL, M. D., recently died at Louisville, Ky. He is said to have been the oldest physician in the United States. He was a pupil of Dr. Rush. Dr. Caldwell was well known to the profession, and was distinguished for his general learning, and for his attainments in medical science.

Dr. J. W. SCHMIT, for nearly half a century a practising physician of Charleston, S. C., where he long since acquired an extensive reputation as a successful practitioner, departed this life in June last, at the advanced age of eighty-five years.

Dr. SAMUEL H. ROYALL, of Chesterfield county, Va., died on the 16th of July, after a brief illness, in the forty-sixth year of his age.

The Town Council of Fredericksburg, Virginia, have recently passed an order, directing that the tax on licences, paid by lawyers, physicians and dentists, for the year 1852, should be refunded. This is in accordance with a decision recently made by Judge Lomax, that such taxes are unconstitutional.—*Fredericksburg Herald.*

Professorships in the University of Virginia.—Dr. Socrates Maupin has been appointed to the chair of Chemistry, vacated by the resignation of Dr. J. Lawrence Smith.

Mr. Smith, of Loudoun Co., Virginia, a graduate of the University, has succeeded Professor Rogers in the chair of Natural Philosophy.

Dr. J. Stage Davis, who has won an enviable reputation as a lecturer on Anatomy, has been promoted to a full professorship, a separate chair of Anatomy having been instituted for this purpose.

The Western Lunatic Asylum.—We learn from the Staunton Spectator that this hospital is nearly full. Attention is called to the 15th and 37th sections of the 85th chapter of the Virginia Code, which requires that *written* application be made to the Superintendent of the Asylum as to whether a vacancy exists, and that his answer should be received before the patient leaves home. Dr. Stribling still continues at the head of the institution, having been induced to postpone the date at which his resignation shall take effect.

Dr. THOMAS HARRIS, Chief of the Naval Bureau of Medicine and Surgery has been discharged.

The *American Scientific Association* met at Cleveland, Ohio, on the 28th of July. Professor Pierce, the astronomer, succeeded Agassiz, the late president. Two hundred new members have been admitted.

Dr. *Alfred Crane*, of San Francisco, late of Alexandria, Va., was shot in a

duel, a short time since, and died soon after. He was the challenging party—his age was 25.

DIED.—By suicide, in Virginia, Dr. D. W. Petrie, late of Oswego, N. Y. At Chicago, Illinois, Dr. Beselin, a German practitioner, accomplished and well esteemed. He presented a bill for attendance upon a lady; but instead of being paid, he was arrested for taking liberties with the patient—which so mortified him that he shot himself.

"Why are medical meetings so intolerably dull?" is a question not unfrequently propounded. One reason may be found in the determination of a combined few, to make the association an instrumentality for promoting selfish ends. In the second place, those least qualified to open their mouths, generally fancy themselves oracles of wisdom, and therefore engross all the time. Modest men soon discover the direction which things are taking, and stay away. If a society does not die at once under such leaden pressure, it dies gradually.—*Boston Med. Journal.*

BIBLIOGRAPHICAL RECORD.

I. *Medical Jurisprudence.* By ALFRED S. TAYLOR, M. D., F. R. S. Third American, from the fourth London, edition. 8vo., pp. 607. Philadelphia: Blanchard & Lea. 1853. (From the Publishers.)

The honourable eminence which Professor Taylor has attained, as an authority in Legal Medicine, is a pledge of the excellence of any work which he presents to the profession on a subject he has so thoroughly mastered. But when, in addition to this, the work appears in print for the seventh time, it is pretty conclusive evidence that it is genuine, and genuinely related to the time.

The student of Dr. Taylor's treatise will not be disappointed in this inference; he will here find the principles of medical jurisprudence fairly and succinctly stated, in the form most available for reference; the dry summaries and generalities of manuals, and the voluminousness of systematic treatises, being equally avoided.

We are glad to learn that the work has already circulated extensively in this country, and cheerfully lend our aid in bringing it still farther to the notice of the profession, being satisfied that the practitioner will find in it all the information which he requires in order to fulfil his duties as a medical witness usefully and with credit to himself; and that the work will be valuable to students as an admirable introduction to those treatises in which the subject is considered in a more detailed and extended manner.

A copious index is not the least agreeable feature in the excellent arrangement of the work.

II. *Principles of Medicine, comprising General Pathology and Therapeutics and a brief view of Etiology, Nosology, Semeiology, Diagnosis, Prognosis, and Hygiénics.* By CHARLES J. B. WILLIAMS, M. D. F. R. S. &c. Edited with notes by MEREDITH CLYMER, M. D. &c. Fourth American Edition, Revised and Enlarged. 8vo. pp. 476. Philadelphia: Blanchard & Lea. (From the Publishers.)

We need say nothing upon the merits of "Williams' Pathology." More than ten years have elapsed since the publication of the first edition, and no work has ever achieved or maintained a more deserved reputation. General pathology is comparatively still in its infant state, but its vast field is being rapidly explored and elucidated. While former editions would have been in rear of the improvements and discoveries, the industry of the American Editor has succeeded in making this strictly a work of the "times." The third edition of the work has been some time exhausted, but the valuable additions made in the fourth compensate for the delay in its appearance. These additions will be found mainly in the chapters upon Etiology, Diseases of the Constituents of the Blood, Nutrition, Semeiology, Prognosis, and Hygiene.

III. *A Report on the Health and Mortality of the City of Memphis, for the Year* 1852. By CHARLES TODD QUINTARD, M. D. (From the Author.)

The physicians of Memphis seem to be fully aware of the importance of sanitary statistics, and of the duty which devolves on them, in common with their professional brethren, of enlightening their fellow-citizens on subjects connected with public hygiene. Last year Dr. Grant presented an essay on the subject (*N. O. Med. and Surg. Journal*), and Dr. Merrill made it the theme of an address; this month brings us another paper of twenty-two pages from Dr. Grant (*Amer. Journ. Med. Sciences*, July 1853), and the report of Dr. Quintard.

The population of Memphis is about 12,000, but "the transient population of flat-boats," and the suburban residents swell this number to a population of 19,000, adding to the mortuary returns. From these and other data, Dr. Quintard estimates the mortality of Memphis at less than 3 per cent.; Dr. Merrill sets it down at 8.20 per cent. or nearly one in twelve.

Dr. Quintard discusses the local causes of disease in Memphis, and treats of the epidemics with which it has been visited. It appears that the streets are excessively filthy, presenting a "creamy mud, through which all pedestrians have waded laboriously," while villainous smells, and nuisances of various descriptions, assail the senses on every side.

We thank Dr. Quintard for his pamphlet, which exhibits his familiar acquaintance with his subject, and his honourable interest in the welfare of the community in which he resides.

IV. *Traité Pratique des Maladies Nerveuses.* Par C. M. S. SANDRAS, Aggrégé de la Faculté de Médecine de Paris; Médecine de l'Hôpital Beaujon, etc. Paris. Germer Baillière. 2 vol. in 8. *Practical Treatise on Nervous Diseases.* By Dr. SANDRAS.

Confessedly there is no practical subject in medicine surrounded with so many difficulties as diseases of the nervous system. We are ignorant of the morbid anatomy of this portion of the organism, and often find the most opposite symptoms in connection with structural changes apparently identical; we do not know accurately, the portions of the cerebro-spinal axis which preside over functions attributed to the nervous system in the aggregate; we cannot enquire into the physical condition of the centres of nervous influence in consequence of their anatomical disposition; the functional disturbance of the brain often deprives us of the information which the patient's statements might afford; and, lastly, we are never sure whether we are treating disease of the nervous matter itself, or only disorders sympathetic of disease in other parts.

Medical authors afford us little assistance; they shrink from engaging in a subject in which the precision required by science in our day is unattainable. Medical teachers consider their time best occupied when they are initiating their auditors into the practical appreciation of positive facts. Their instruction is adapted to the most pressing wants of their students, and rarely comprises more than the diagnosis and treatment of acute disease, the physical recognition of chronic disorders, and the numerous applications of auscultation and percussion. The chronic maladies which afford uninteresting topics for lectures, or whose lesions are not revealed by the scalpel or by reagents, those, in fact, which the physician observes better than the student, are overlooked in the progress of contemporaneous science.

And yet practical medicine is not composed of *interesting cases;* well-marked pneumonias, acute rheumatism, diseases of the heart, peritonitis, etc., are of comparatively rare occurrence in practice. Our skill is much more frequently invoked for the relief of pain, of indisposition, of general derangement of health to which we vainly attempt to assign a cause. What a field is here opened for the charlatan! This is the sphere in which their triumphs are achieved. The experienced physician dismisses the patient as presenting no disorder recognized in his nosology, or has recourse to unscientific works for advice in regard to affections which he has not studied personally at the bed-side. The quack appeals boldly and confidently to the imagination, lays down excellent dietetic regimen, and frequently achieves cures which the man of science has in vain essayed. We think it will be generally admitted that the nervous element has been too much overlooked in our pathology.

We have been led into these rather trite reflections by these volumes of M. Sandras, which have just come to our notice although it is two years since they issued from the press. They form the most lucid and instructive work which we have ever perused on this obscure subject.

We regret that the brief space within which we are compelled to restrict our notices of books—the most important if not the most popular portion of a medical journal—forbids us to attempt an analysis of this most admirable and practical treatise. It must suffice to observe that the doctrine which pervades the whole work is this: that the majority of nervous diseases consist of functional disturbances of the nerves, without any organic alterations which can be appreciated by our present modes of investigation.

Even those who object to this doctrine, and deny all simple modifications of the sensitive system, and only see, in these diseases, the results of vasculo-nervous irritation, or of organic change in the nervous tissue, will be glad to find grouped together those diseases commonly called nervous, those affections which anatomical science cannot classify, those disorders against which a certain class of remedies have been, from all time, empirically directed.

M. Sandras has studied the causes and symptomatology of nervous diseases with unwearied patience. Although he despairs of deriving much light from pathological anatomy, he has not neglected its assistance, but has faithfully recorded whatever lesions were found to accompany the diseases he describes. He has bestowed great attention on the treatment of these affections, and lays down many sound, practical rules, for their management and cure. His practice is never based on theories of diseases, but always upon convictions of their causes, or upon the results of experience.

The work may be procured from Mr. A. Morris.

V. *The Medical Reporter. A Quarterly Journal, published under the direction of the Chester and Delaware County Medical Societies.* No. 1. July 1853. West Chester, Pa.

The causes which have led to the publication of this new medical periodical are thus set forth:

"Within the bounds of the two societies a great many interesting cases of disease are lost to the professional reader for the want of a more convenient opportunity of publication. To record these cases—to circulate biographical notices of those deceased physicians who have acquired among us a reputable standing in the profession—to foster a more general interest in the dissemination of medical science, and to stimulate and bring into fuller action the medical talent within our limits, are the principal incentives to the publication of this journal."

We offer our new colleagues our best wishes for their success in carrying out these laudable objects.

Their first number is well printed and judiciously arranged. It contains a report of the proceedings of several local medical societies, and of the American Medical Association; two biographical sketches of revolutionary physicians; a very imperfect report of a fatal case of internal hæmorrhage; and an account, conspicuous for its bad spelling, of a congenital tumour of the scalp.

THE FOLLOWING BOOKS HAVE BEEN RECEIVED.

A Treatise on Operative Ophthalmic Surgery. By H. Haynes Walton. 8vo. pp. 628. London. John Churchill. 1853. (From A. Morris.)

Medical Jurisprudence. By Alfred S. Taylor, F. R. S. Third American, from the fourth London, edition. Philadelphia. Blanchard & Lea. 1853. 8vo. pp. 621. (From the publishers.)

A Report on the Health and Diseases of the City of Memphis. By Charles Todd Quintard, M. D. Memphis. 1853. (From the author.)

Bibliographical Remarks on Lowig's Physiological Chemistry. By Dr. Bennett Dowler. [Reprinted from the N. O. Medical and Surgical Journal.] (From the author.)

An Address at the University of Nashville. By John M'Ewen, A. M. Nashville. 1853. (From the author.)

On Diseases of the Liver. By George Budd, F. R. S. Second American, from the last and improved London, edition; with coloured plates, and wood cuts. Philadelphia. 1853. Blanchard & Lea. 8vo. pp. 468. (From the publishers.)

Dr. H. A. Ramsay's Letter to Dr. Jas. Bryan on the Southern Negro, etc. Philadelphia. 1853. (From the author.)

Transactions of the Thirtieth Annual Meeting of the Medical Society of Virginia, to which is prefixed the president's address. pp. 35. Richmond. Ritchies & Dunnavant. (From the Society.)

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A History of Infusorial Animalcules, Living and Fossil. By Andrew Pritchard, M. R. J. London. 8vo., pp. 704. (From A. Morris.)

Ricord's Letters on Syphilis, translated by W. P. Lattimore, M. D. Philadelphia. 1852. 8vo., pp. 270. A. Hart. (From the publisher.)

Principles of Medicine. By Charles J. B. Williams. Fourth American edition, revised and enlarged. 8vo., pp. 476. Philadelphia. 1853. Blanchard & Lea. (From the publishers.)

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Address to the Graduates of the University of Buffalo. By Frank H. Hamilton, A. M., M. D. Buffalo. Jewett & Co. (From the author.)

Respiration Subservient to Nutrition. An Inaugural Essay. By E. Leigh, M. D., Townsend, Mass. Ticknor, Reed & Co. Boston. 1853. (From the author.)

The Claims of the Medical Profession. An Address delivered before the N. Y. Med. Society. By A. Clarke, M. D., President of the Society. Albany. 1853. (From the author.)

Twenty-first Annual Report of the Trustees of the Perkins Institution for the Blind. Cambridge. 1853. pp. 43.

On Displacements of the Non-gravid Uterus. By J. F. Peebles, M. D., of Petersburg, Va. The Dissertation to which the Fiske Fund Prize was awarded. (Published by Request of the Rhode-Island Medical Society.) Philadelphia. 1853. (From the author.)

An Aderess delivered before the Am. Med. Association, at its Seventh Annual Meeting, May 1853. By Beverley R. Wellford, President of the Association, &c. Published by order of the Association. Philadelphia, 1853. (From the author.)

The American Reprint of Ranking's Abstract. January to June 1353. Philadelphia: Lindsay & Blakiston. (From the publishers.)

The Medical Reporter, Quarterly, pp. 32. West Chester, Pa.

Journal of the Franklin Institute. Philadelphia. July.

The American Polytechnic Journal. New York. May, June.

The North-western Medical and Surgical Journal. Chicago. June.

The Western Medico-Chirurgical Journal. Keokuk, Iowa.

American Reprint of the Foreign and British Medico-Chirurgical Review. New York. S. S. & W. Wood. (From the Publishers.)

THE

VIRGINIA

MEDICAL AND SURGICAL JOURNAL

FOR SEPTEMBER 1853.

ART. I.—*Memoir upon some of the Gastro-intestinal Diseases of Early Infancy.* By Dr. RILLIET, Physician-in-chief of the Geneva Hospital. [CONTINUED.]*

PROGNOSIS.—*Mild Enteritis.* As its name indicates, this disease is not dangerous; nevertheless it may be the precursor of the acute or chronic forms of the disease, and should not be regarded as insignificant.

Cerebral Enteritis. Notwithstanding the apparent gravity of the disease, it usually terminates in recovery. All of the cases of cerebral enteritis which we have inserted in this memoir, with the exception of the one which follows, are examples of cure: and I have observed many others with an equally favourable result. It is the duration, the repetition, and the gravity of the eclamptic symptoms, which constitutes the danger; this is much greater when the eclamptic is conjoined with the choleric form, as in the following case:

CASE VII. In September 1850, I was called in consultation to see a child of two months of age with enteritis. The attending physician informed me that the child had been nursed by her mother and in part fed with cow's milk, and had had three weeks previously derangement of the bowels. A fortnight later a prolapse of the rectum

* See page 517 et seq.

had occurred, and the child had daily passed small mucous passages streaked with blood. Nevertheless the child had not grown thin, and the parents had not thought it necessary to call a physician.

The 22d of September the acute disease came on with frequent evacuations and great fretfulness.

The 23d, the diarrhœa continued, and was accompanied by frequent vomiting. The passages were more serous, without being completely so; some were greenish, others yellow.

The 24th, the diarrhœa and vomiting persisted, *coldness of the extremities* came on, and spasmodic movements of the eyes.

The 25th, a second attack of eclampsia occurred, the arms were convulsed as well as the eyes. The diarrhœa continued, but the evacuations were thick.

I saw the child at three in the afternoon. (I copy literally my notes of the condition in which I found her.)

The little girl was lying near her nurse, sleeping peacefully. Her respiration was regular, and also her pulse, which beat at 140; it was rather full for a child of that age. The skin was warm; there was no flaccidity of the muscles, or extreme emaciation. The eyes were hollow, without being sunken. The countenance had none of the appearances which I have often observed in cholera infantum. The mouth was moist, the tongue natural. No muguet. The abdomen was a little flaccid.

The mildness of the cerebral symptoms, and especially the non-persistence of them, together with the vomiting, diarrhœa, and coldness, induced me to believe that I had to do with a gastro-intestinal affection with a reaction towards the encephalon, and not an acute disease of the brain. I gave a favourable prognosis, provided the vomiting and diarrhœa did not return with frequency; I ought to have added, provided no new attacks of eclampsia supervened.

This is what occurred. From the 25th to the 27th no vomiting occurred; the evacuations diminished in number, but the pulse continued frequent. The child had a tendency to drowsiness. At six in the evening on the 26th an attack of convulsions came on, and ended in death the next day.

The autopsy was made thirty-six hours afterward. There were no signs of putrefaction. No traces of effusion in the brain, nor of meningitis, but there was evident congestion of the pia mater and of the cineritious substance, without softening. The brain was of the consistence usual at that age, that is to say, rather soft.

The thoracic organs were healthy.

Abdomen. The stomach had its ordinary form and position; slight softening of the mucous membrane of the great curvature, which was absent in some places, the sub-mucous tissue was pearly, resistant, perfectly healthy.

The rest of the mucous membrane was healthy. No trace of injection.

The small intestine presented three invaginations of three or four inches in length, two or three feet one from the other; the invaginated

portion was readily released; no adhesions. In opening the bowel at this point, I found the patches of Peyer very red, slightly prominent, and a little soft. (Follicular enteritis with invagination.)

The rest of the intestinal canal, and the other organs of the abdomen were perfectly healthy.

It is evident that the child would have recovered except for the attack of eclampsia. As I have said, this case is analogous to Case III., and is an example of the union of the choleric and cerebral forms, proving that these various species are in fact one and the same disease.

The lesions in this instance, limited to inflammation of a few of the glands of Peyer, with slight softening of the stomach, prove the complete disproportion which may exist between the symptoms and the lesions, just as there is an absolute difference between the real and apparent gravity of this affection. I concluded that the symptoms had not indicated the existence of invaginations during life. Invagination was found at many points in the small intestine, and altogether resembled that which is seen in children who have succumbed to various diseases unconnected with abdominal derangements. The principal symptoms too were wanting, for the small mucous passages streaked with blood, which preceded the invasion of the disease, were evidently due to the prolapse of the rectum, and, when the disease was fairly established, they were succeeded by serous discharges.

Choleriform Enteritis. The prognosis is very grave. More than three-fourths of my patients died. Nevertheless I have been fortunate enough to save some who appeared in a hopeless condition.

The circumstances which appeared to be the most unfavourable were: very tender age, the female sex, poverty, and epidemic influence.

1. *Tender age.* Children from three weeks to three months old all died.

2. *Sex.* Only one girl recovered, but it is not to be forgotten, that the female were much less numerous than the male patients.

3. *Social condition.* Four of the patients who recovered, belonged to the higher classes of society.

4. The patients who recovered were all attacked during months in which the disease did not reign epidemically.

As to the symptoms, the subjects who recovered presented exactly the same as those who died, except that the most alarming symptoms have sometimes been less intense and less protracted.

After carefully reviewing my cases, I conclude that a patient is not to be despaired of while the pulse retains its uniformity, while the alteration of the countenance is not profound, when coldness does not gradually increase, or when, after coldness and loss of pulse have occurred, a salutary reaction supervenes.

The duration is the most important element in the prognosis; however formidable the symptoms may be, the case is not hopeless if they have lasted only a short time.

Moreover, the prognosis should always be reserved. Cases are frequently encountered which appear trivial at first, but in which the most alarming symptoms suddenly supervene. The physician then modifies his prognosis, but is again made to give an erroneous opinion by the apparition of signs of a favourable issue.

The following case illustrates the caution which is requisite in giving a prognosis:

Case IX. G—— was a boy of seven months, brought up by a wet-nurse, and weaned at four and a half months. He was the son of a pastry-cook, and ate largely and frequently of pastry. He presented no appearances of the process of dentition.

He had suffered from diarrhœa for eight days; at first eight or nine passages daily; during the last two days, fifteen passages. The evacuations were all alike, they were serous and mucous, colourless, without blood. The patient had rapidly lost flesh.

Thursday, October 31st, 1850, at four in the afternoon he commenced to vomit, and rejected each mouthful of liquid which he took. His thirst was excessive.

I was summoned on November 1st. I saw the child in his nurse's arms, *seated*, holding his head well, observing objects, but presenting a dejected aspect; the eyes were surrounded with a dark ring, the tongue was moist, the gums neither dry nor red, the abdomen natural. He appeared to me slightly indisposed, suffering from one of those functional digestive disorders so frequent at his age. The intensity of the thirst and the frequency of the vomiting, however, ought to have placed me on my guard.

I prescribed half a grain of calomel, which was rejected. I then ordered a second dose which was retained; but the child continued to vomit every spoonful of liquid which was given it; he had several evacuations, deeper coloured than the preceding.

At three o'clock, he suddenly uttered shrill cries, his eyes were turned upwards convulsively, and he fell motionless into the arms of his nurse.

I arrived, and found him in a most alarming condition; he was prodigiously altered since my first visit, three hours previously. The eyes were closed and deeply sunken, the nose was cold, the pulse thread-

like, the feet icy-cold. There was no sign of sensibility, nor any convulsive movement.

I immediately applied a sinapism which covered the whole abdomen, and directed every quarter of an hour, alternately, a tea-spoonful of Malaga wine, and a dessert-spoonful of the following potion: ℞. Aq. cinamom. ℥ij; Liq. anodyn. Hoffm. gtt. xij; Spir. zingib. gtt. xij. After ten minutes I removed the sinapism from the abdomen; it had reddened the skin slightly, but the child had not felt it. I enveloped the legs in two other sinapisms, which were subsequently to be placed on the thighs, and replaced by cataplasms with vinegar.

These directions were punctually executed. The child vomited the first two doses of his potion, the Malaga wine was retained. After an half-hour I found that the pulse resumed its force and regularity, but it was very frequent. The child continued to utter cries, prompted probably by the pain of the sinapisms. His thirst was insatiable; he drank with avidity the little spoonfuls of his potion. I saw him frequently during the afternoon; the grave symptoms gradually amended. At six in the evening I substituted for the tonic potion and wine, a potion containing two scruples of subnitrate of bismuth in two ounces of vehicle, two tea-spoonfuls every half hour, and two table-spoonfuls of chicken water. The potion and the chicken water were tolerated.

On Saturday the amelioration continued, but the child was not out of danger; there was great anxiety, the pulse was very frequent, there was neither diarrhœa nor vomiting. The potion was continued, with an infusion of aromatic herbs.

On November 3d, the improvement continued; the features appeared less altered; the warmth of surface was uniform; there was neither vomiting nor diarrhœa; the thirst, however, was still excessive. I ordered an increased quantity of chicken water, and a little milk, and lengthened the intervals between the doses of bismuth.

The 4th of November the child was in a condition analogous to that in which I first saw him. His attention was easily attracted, and the irritability had diminished. He had passed one evacuation, blackened by the bismuth. [A bath, potion every four hours, more nourishing broth, milk, and milk mixed with chicken water.]

From this time the cure was rapid. The child regained strength rapidly. Nevertheless he was not entirely free from fever for three or four weeks.

This case [illegible] while the child was under my care. [illegible] ons. The appearance of the [illegible] preservation of the [illegible] But I [illegible] tion of the [illegible] lentition. Eight days of [illegible] an excessive [illegible] this. [illegible]

and found the child *irrecognizable;* a new series of symptoms had supervened, which indicated a profound disturbance of the nervous system,—emaciation, loss of pulse, coldness, and other grave signs. The change was so sudden and complete, that I had little hope of saving the little patient; the case appeared to me identical, though more rapid in its progress, with that of the child who was the subject of the tenth observation. Revulsives upon an extensive surface, and in the vicinity of the affected organs, and tonics appeared to me to be the remedies indicated. I am convinced that they contributed to the cure. A more general revulsion might be employed in such cases, by giving a mustard bath as Professor Trousseau advises, or better still, by enveloping the child in a sheet saturated with a strong infusion of mustard as I have had occasion to do.

In the edition which M. Barthez and I will shortly publish of our treatise on the diseases of infancy,* we shall discuss the nature of the disease I am describing. For the present I limit myself to adducing two cases, which appear to me to have an important bearing upon the pathological physiology of choleriform enteritis.

Case X. This child was a boy of 14 months. His constitution was good; his dentition well advanced; he had six incisors and four molars; the canine teeth had not appeared.

His health was good before the onset; the disease could not be attributed to any proximate cause. The predisposing causes were evidently the season,† injudicious regimen, and the lymphatic temperament of the mother.

The parents informed me that the onset of the disease was marked by high fever and by diarrhœa. I saw the patient on the second day (September 27th, 1849): the skin was burning, the pulse at 140, the respiration was accelerated, but perfectly free; there was no cough, the tongue was white, the abdomen swollen; no spots or sudamina, or cerebral symptoms; there was diarrhœa and excessive thirst. I prescribed syrup of ipecacuanha as an emetic. The child took four spoonfuls in ten minutes without vomiting, but he *passed abundant evacuations.*

The disease commenced the 26th of September; the symptoms persisted until the 31st, particularly the intense fever and the diarrhœa. The child became very irritable; the irritability alternated with drowsiness.

The febrile condition was always the most characteristic symptom.

Treatment. The child took a potion daily containing twenty drops of tincture of aconite, and cataplasms were applied to the abdomen.

* Traité clinique et pratique des maladies des enfants. Par MM. Rilliet et Barthez. Paris, 1843, 3 vol. in-8.

† I had seen during the preceding fortnight a great number of young infants with acute affections of the digestive canal; the disease was grave and often mortal.

On the 30th, one grain of calomel was administered in two doses. Under the influence of this treatment, the diarrhœa diminished in abundance.

The sixth day (31st), the scene changed; the fever fell, the heat of surface was succeeded by coldness; the emaciation was considerable.

The seventh day the coldness was more marked, the nose and the hands were icy, the pulse was feeble, the eyes were deeply sunken. The child had wasted away, although there had been no vomiting. The diarrhœa persisted; there were about six passages daily, but they were not very copious. There was no close relation between the general condition and the local condition of the abdomen; the latter had not, like the former, been suddenly and gravely modified; but it should not be forgotten that the diarrhœa had lasted for a long time, and that after the administration of the ipecacuanha it had been temporarily very profuse.

At four in the afternoon of the same day, the disease became aggravated: the coldness became general, the respiration frequent, the pulse extremely small, the eye dull, the surface waxy pale, the abdomen flaccid. There were no convulsive movements.

At ten in the evening, the coldness was still greater; the pulse was imperceptible, nevertheless the child was still able to swallow. He died at eleven o'clock.

I did not perceive either sudamina or spots at any period of the disease, or gurgling in the iliac fossa, or projection of the spleen beyond the ribs.

The autopsy was made twenty-four hours after death. The weather was cool; the wind north.

1. *Head.* There was a slight sero-sanguinolent effusion under the arachnoid; one or two spoonfuls of liquid were found at the base of the brain, proceeding probably from the ventricles. There was no lesion of the brain or of its membranes. The effusion was unaccompanied by false membranes or granulations, and perfectly resembled what I have observed in many children who have died of various diseases.

2. *Chest.* Perfect integrity of all the organs.

3. *Abdomen.* Upon commencing an incision at the inferior portion of the abdomen there escaped several tea-spoonfuls of an acid reddish liquid, which closely resembled what had been thrown off from the stomach, but there was no trace of peritonitis. I had scarcely touched the pyloric extremity of the stomach to place a ligature upon it, when the organ collapsed, and allowed a large quantity of a reddish liquid of an acid odour to escape. This discharge took place from the greater curvature. The whole portion of the stomach lying near the concavity of the spleen was destroyed entirely; its remains were agglutinated to the spleen; the portion that could be appreciated was reduced to a gelatinous pulp, which slipped away from the finger when an attempt was made to pinch it. The colour of the parts thus profoundly altered, were of a livid red, or even blackish colour. As the healthy parts were approached the membranes could be pressed without

being destroyed; the peritoneum could be demonstrated, then the hypertrophied muscular fibres, and lastly the submucous tissue and the mucous membrane. The transition from the healthy to the diseased structure was therefore gradual. The remainder of the stomach was perfectly healthy.

The intestines contained a yellowish matter, but presented no lesion. Some of Peyer's glands were slightly prominent, but were not altered in colour or consistence. The mesenteric glands were reddened and enlarged, but not softened. The spleen was slightly augmented in volume, but not softened. There was no lesion of the liver or kidneys.

This observation is precious; it enables us to prove:

1. That gelatiniform softening of the stomach, or at least the morbid action which presides over this lesion, occurs during life.

2. That this morbid action is revealed by special symptoms.

3. That the symptoms which announce a profound alteration of the vital forces, (coldness, smallness of pulse, prostration,) do not depend alone upon serous evacuations.

4. That this disease, and analogous cases, should be compared to cases of poisoning.

The diseases of the patient X. presented two distinct phases.

In the first period, which lasted five days, we had all the symptoms of an acute abdominal affection; one could only hesitate between typhoid fever and enteritis, diseases so easily confounded in infancy. Nevertheless the age of the little patient, the absence of spots, of sudamina, of meteorism, of gurgling, of enlargement of the spleen, together with the results of the autopsy, left me in no doubt in regard to the nature of the disease. I have observed at Paris and Geneva a sufficient number of children dying from typhoid fever, to be able to affirm that, notwithstanding the slight prominence of the glands of Peyer, the tumefaction of the mesenteric glands and spleen, these lesions cannot be considered in the present case as the anatomical characteristics of that pyrexia. The patches exhibited no other lesion than that slight hypertrophy which is observed in cases of mucous hypersecretion; the mesenteric glands and spleen were only slightly augmented in volume, and were not softened. The reigning epidemic of grave non-typhoid abdominal affections was another proof that this was a case of enteritis and not typhoid fever. However this might be, the sixth day an entirely different series of symptoms supervened. The change was instantaneous, and the danger increased every moment.

Nevertheless no new local symptom revealed what organ was specially attacked. No symptom indicated intestinal perforation. It is evident therefore that the rupture of the stomach did not occur during life; moreover the integrity of the peritoneum proves this. But if the perforation did not occur before death, I believe that the lesion of the stomach did, or, at any rate, the organic causes which produced it. It is impossible not to establish the relation of cause and effect between the manifestation of the new symptoms and the characteristic lesions of the stomach. These symptoms cannot be attributed to the abundant serous discharges, since the child did not vomit, and had only five or six evacuations daily. Neither can they be attributed to intense inflammation, because both pain and vomiting were absent. In this point of view I may be allowed to observe, how little value can be assigned to the symptomatology of softening of the stomach as an essential disease. I am convinced that both the symptoms and the lesion are produced under the influence of a profound alteration of nutrition, resulting from a suspension of nervous influence which produces in the least resisting portion of the digestive tube, and as a local effect, a lesion which may be compared to ulceration.

The alteration of the gastric fluids was not doubtful in this case (their acid odour was intense). We believe that this alteration of the liquids, conjoined with derangement of the ganglionic nervous system, rendered the disease more severe.

Case XI. A child three years of age was attacked by a lobar bronchopneumonia during a catarrhal epidemic constitution. The fourth day, the disease being in the way of amelioration, the parents administered four ounces of syrup of ipecacuanha,* which did not cause vomiting. During the night the child had an *enormous* passage, followed by many others of a serous character.

The next day there was a complete change in the condition of the little patient, considerable emaciation, constant jactitation, profound alteration of the features, imperceptible pulse, coldness of the extremities.

I saw this little boy on the sixth day, about thirty-six hours after the apparition of the grave abdominal symptoms. He complained constantly; prostration had succeeded the jactitation; the child laid motionless upon his back. I trembled as I had him seated in order to auscult him, fearing that the change of position might induce a mortal syncope. The face was extremely pallid; the abdomen was flaccid;

* I *suspected* that this syrup also contained a certain proportion of tartarized antimony.

the liver was slightly prominent in the epigastrium. The pulsations of the heart were muffled; the respiration was accelerated; posteriorly at the summit, on the right side, bronchial souffle, mucous râle, diminished resonance. These symptoms continued, and the patient died at three in the afternoon, four hours after I saw him.

At the autopsy I found the evident anatomical characters of double bronchitis in the first stage, and of pneumonia in the second and third stages, at the posterior portion of the right upper lobe. But the most curious lesion was in the intestinal tube; from the non-valvular portion of the small intestine to the anus, the whole mucous membrane was sown with white isolated follicles, prominent, and varying from the size of a large pea to the size of a pin's head. It was a true eruption. The glands of Peyer were prominent and slightly softened, but scarcely reddened. The mucous membrane was perfectly normal. The stomach was healthy, with the exception of two minute traces of ecchymosis.

The liver was enlarged and congested.

The mesenteric glands, the spleen and the kidneys, were in their normal condition.

Were not the symptoms of this patient identical with those presented by the preceding one? Both of them, five days after the onset of a febrile disease, located in the abdomen in one, and in the chest in the other, passed from a condition which was not alarming to a condition of the greatest gravity, the principal symptoms of which were general coldness, emaciation, loss of pulse and strength, complete alteration of the features, and flaccidity of the abdomen. In the first case these symptoms were followed by a lesion of the stomach alone, and in the second, by an acute lesion of the whole follicular apparatus of the intestine. In the first, we can hardly invoke the abundance of the alvine evacuations to explain the derangement of the circulation and calorification. In the second the mortal result seemed closely connected with the apparition and gravity of the intestinal symptoms. As to the intimate nature of the follicular affection, I believe that it was inflammatory. The absence of redness and ulceration must be attributed to the rapidity of the disease.

Diagnosis.—The symptoms which are most valuable in forming the diagnosis, and which distinguish choleriform enteritis from other varieties of acute abdominal affections, are: after a prodromic diarrhœa of variable duration, the occurrence of *incessant vomiting*, with an increase of the diarrhœa, which assumes a serous character, the appearance of *insatiable thirst*, of *profound alteration of the countenance*, of rapid emaciation, of coldness of the nose and extremities, and of extreme smallness of the pulse.

These symptoms are not found combined, either in the cerebral or mild forms of the disease.

As to the other diseases of early infancy which may simulate choleriform enteritis, they are not numerous, and the distinction between them is easily made. In typhoid fever, which is extremely rare in infants, the sudamina, spots, meteorism, dryness of the tongue, and, in the great majority of cases, the intense fever, will suffice to establish the diagnosis. Neither can choleriform enteritis be confounded with peritonitis, since the diarrhœa is abundant, and the tympanitis and pain on pressure are wanting. Invagination and choleriform enteritis resemble each other in the abundance of the vomiting and diarrhœa, but in invagination the passages are mucous-sanguinolent or bloody, and not serous; subsequently stercoracious vomiting, deformity of the abdomen, together with the absence of coldness and emaciation, will seem to confirm the diagnosis.

Asiatic cholera is undoubtedly the disease which resembles choleriform enteritis most closely, as I have already had occasion to observe. On this point I will content myself by citing Dr. Bourgeois:

"True cholera differs sensibly from cholerine; in the first the terrible cramps which torment the patient offer one unmistakeable sign; the skin is more or less blue, a condition which is never observed in cholerine; lastly, the pulse, although very small, never ceases to beat in cholerine until death, whilst, in Asiatic cholera, it is imperceptible long before the patient is in the last agony. During 1832, I observed quite a large number of cases of this disease among very young children, and their symptomatic progress corresponded exactly with what is observed in adults."

Cerebral enteritis, as its name indicates, may be confounded with meningitis. I will simply remark that in the convulsive variety the cerebral condition does not last more than twenty-four hours, and that the diarrhœa suffices to establish the diagnosis. In the meningeal variety, when constipation exists, the distinction may be difficult (see Case VI). Nevertheless the nervous symptoms are not comparable either in gravity or duration with those of frank meningitis, the only form which can be confounded with this variety of enteritis.

TREATMENT.—The different forms of gastro-intestinal affections are not all to be treated alike, but there are some general considerations which are applicable to all the varieties.

Before instituting any treatment, it is most important to discover

the causes of the disease. If the adage *sublata causa tollitur effectus* is ever true, it is emphatically in the gastro-intestinal diseases of infancy; but success cannot be obtained without keeping in view that other precept: *principiis obsta.*

There are some causes in regard to which the physician is powerless, but there are others which he can more or less directly control. We cannot alter hereditary or physiological conditions or the influences of climate; but in many cases we can completely modify the mode of life, and thereby successfully oppose, if not entirely suppress, the most dangerous anti-hygienic causes.

The first question that the physician should address to the parents of a child suffering from a gastro-intestinal affection is this: How is the child nourished? And the first advice which he should give should be in regard to the proper regulation of the diet.

If the child is nourished at the breast, it is necessary to examine carefully the health, habits and hygiene of the nurse. It is necessary to ascertain the quantity of milk by inspecting the breasts, and its quality by the microscope and lactoscope. If the milk does not possess its proper characteristics, or if the health of the nurse is feeble, a change should be advised without hesitation. However, before taking this course, it is well to examine whether the derangement of the bowels is not the consequence of errors of diet on the part of the nurse, or of the improper periods at which the child is suckled. In the first case it is sometimes sufficient to change the regimen of the woman in order to cure the disease of the child, if it is slight and recent. The nurse should be advised to eat chiefly of plain soups and roasted meats; at her breakfast she should drink an infusion of roasted acorns; fresh vegetables, fruits, salads, cheese and coffee, or other excitants, should be forbidden. If the chemical examination indicates that the milk is too rich, the bi-carbonate of soda may be prescribed with advantage.

If the diarrhœa is not to be attributed to the bad diet of the nurse, but to the improper regimen of the infant, in many cases by simply regulating the hours at which the child shall be put to the breast, the irritation of the bowels may be subdued. I have often cured diarrhœa which had existed for a long time simply by regulating the hours of suckling.

If the modifications in the regimen of the nurse and child are unsuccessful, the nurse must be changed. I refer to the work of M. Donné for details concerning this troublesome and delicate change, and

the precautions which are requisite in order that it may be of advantage.

If the child is fed by the bottle, and the diarrhœa does not diminish in a few days, a wet nurse should be procured; but this is not always possible, therefore it is necessary to meet the difficulty by using ass's milk, or among poor people, by means of a mixture of milk and veal broth, in the proportion of two-thirds of milk to one-third of soup. For the children of the wealthy, I prefer a mixture with chicken broth. The milk should be given at regular intervals, and should always be procured from the same cow; and the cow should be fed on hay and not on grass. In accordance with the advice of M. Donné, I do not direct the milk to be boiled, but simply require that the bottle should be plunged into hot water. It is important that the vessels containing the milk should be scrupulously cleansed.

As a general rule I greatly prefer that the child should be nursed, but I have observed many cases in which gastro-intestinal affections were checked by cow's milk after several nurses had been tried. We have also found advantage from administering in some cases to children with diarrhœa, panada made with ship biscuit or toasted bread, without however prohibiting suckling.

Children are occasionally met with in practice with whom both the milk of the nurse and of the cow evidently disagree, and who can only be fed on light broths. But these anomalies do not at all affect the general rule.

If the gastro-intestinal affection supervenes in a child who has been weaned, I advise that if the disease is severe the child should return to the breast. I have seen truly marvelous results from this practice. It is said that all children will not consent to return to the breast; this is true, but the number that refuse under proper management is very small. The first condition of all is to procure an intelligent and complaisant nurse, and a reliable woman to superintend her; efforts should not be abandoned in consequence of one fruitless attempt; success may not be obtained until after several days of perseverance. If the child positively refuses to take the breast, or if weakness precludes it from doing so, the advice of M. Donné must be followed, and several nurses must be procured to furnish milk on which the child may be fed; but this is not always easy, and recourse must be had therefore to ass's milk, or the mixture of cow's milk and broth, taking care to place the milk into five or six bottles, each containing about two

ounces; one of these is given every three or four hours, the bottle being shaken, in order that the milk and cream may be well mixed.

If the milk diet agrees with the child, the ass's milk or the nurse's milk should be given pure; if it disagrees, a certain quantity of lime-water or bi-carbonate of soda should be added to the milk, and care should be taken to place warm napkins over the child's abdomen while it drinks its milk. These simple precautions will often suffice to cause it to be tolerated. We know that the milk diet is suitable, when the child does not suffer from eructations, or distention of the stomach after its meals, when the diarrhœa diminishes, and the stools contain less mucus and indigested caseine. When the diarrhœa persists, and the caseine passes without being digested, it is a sign that the milk diet is not supported. Then, in the case of a suckling child, it is necessary to change the nurse until the digestion is re-established. M. Donné and I have advised that this should be done five or six times successively. In the case of a weaned child who cannot tolerate milk, arrow-root, panada, rice water, and chicken broth must be substituted. The latter aliment should be more or less concentrated according to the age of the patient. The yelk of an egg beaten up with broth constitutes a restorative nourishment for children exhausted by an abundant diarrhœa.

The nourishment of young infants is almost exclusively liquid; they take their food and drink simultaneously; I believe that with the exception of milk and broth, drinks should be given with great reserve. Some slightly bitter infusion is most appropriate. It should be cold, and given in small doses.

Corporeal hygiene demands as much attention as dietetics.

It is scarcely necessary to say that the most scrupulous cleanliness should be observed in the care of the little patients; thus the irritations about the nates, and the erythematous and pustular affections so frequently observed in children who are neglected, may be avoided. It is important that they should be warmly dressed, and especially that the abdomen should be enveloped by a flannel band.

One point which should always attract the attention of the physician, who attends a child suffering from a gastro-intestinal affection, is the dentition. The opinions of practitioners are not united in regard to the efficacy of lancing the gums; I have often practiced this little operation, usually in acute cases, and in children presenting cerebral symptoms, but have never obtained any very evident results; but as

many of my brethren assert its efficacy, especially in cases in which vomiting is obstinate, I advise that it should be performed; it has no inconveniences provided a somewhat deep crucial incision is made quite down to the tooth.

MILD ENTERITIS.—The following is the treatment that I have found most successful:

1. Enforce the hygienic rules just mentioned.

2. If change of diet does not suffice, and the diarrhœa persists, I prescribe for two or three days, one, two, or three doses of calomel, from half a grain to a grain, according to the age.

The calomel produces two very different effects: Sometimes it suppresses the diarrhœa, in other cases it increases it temporarily. If the first effect, which is the rarer, occurs, I await the return of the diarrhœa before acting; if the diarrhœa does not return, I leave the disease to itself. In the cases in which the calomel augments the diarrhœa, I replace it by the subnitrate of bismuth, which I give in tolerably large doses of one or two scruples in twenty-four hours for a child at the breast. I persevere in the bismuth until the diarrhœa is arrested. It is rarely that this treatment is not crowned with success in a few days. I have often employed, when the diarrhœa had a tendency to disappear, the extract of logwood, in doses of 12 grains to 2 scruples in the twenty-four hours. This is an agreeable remedy, having somewhat the taste of liquorice. Dr. West gives the extract of logwood combined with the tincture of catechu, 5 grains of the former with 10 drops of the latter, thrice daily. The same physician advises three or four drops of *liquor potassæ* with wine of ipecac. every four hours in a little milk, when the diarrhœa is connected with dentition. At night, after a warm bath, he gives a grain each of Dover's powder and mercury-with-chalk.

If the disease becomes modified; if the chronic succeeds the acute form, or the symptoms of the grave variety supervene, it is necessary to employ other remedies.

CHOLERIFORM ENTERITIS.—This disease is extremely dangerous, and requires the most prompt interference. The chief indications are:

1. To arrest the vomiting and diarrhœa;

2. To sustain the failing vital forces;

3. To restore the temperature of the skin to its normal standard;

4. To nourish the child, as soon as it can be done, in order to oppose the fatal effects of inanition.

Hygiene. No other food than nurse's or ass's milk, and cold chicken broth in small quantities every two or three hours.

EXAMINATION OF REMEDIES.—*Calomel.* I have occasionally arrested the diarrhœa and vomiting, according to the advice of Condie, by means of small doses of calomel. I have also given *hydrargyrum-cum-crêta* at the dose of a grain every two hours. In extremely violent cases, Condie recommends the combination with the calomel of minute doses of ipecacuanha, and Dewees advises the addition of small quantities of acetate of lead.

Nitrate of Silver. If the vomiting and diarrhœa are incessant, I prefer the solution of nitrate of silver (gr. ½ to gr. ℈, water ℥ij). I give a tea-spoonful every hour, and continue its employment as long as the grave symptoms persist. I have cured several children with the nitrate of silver. Its effect, as I have already said, (see Case II.) is, I believe, neurosthenic rather than topical and astringent.

Opium. Many practitioners, and in particular MM. Cruveilhier, Wiesemann, Vogel and Hufeland, advise the use of opium; others reject it from apprehension of its producing the cerebral symptoms to which children affected with gastro-intestinal affections are particularly subject. I am of this way of thinking, and dread the effects of narcotism in young children, having seen a number of cases in which it was mortal. I have, however, witnessed the beneficial effects of laudanum given in enema to a child eight months old, on the fifth day of a severe attack of choleriform enteritis. Condie rejects opium in large doses at the commencement, but he admits that small doses are useful at the period at which it is only necessary to relieve the nervous system. M. Cruveilhier prescribes at the commencement the following potion: Water, ℥iij; Extract of opium, gr. 1-5th; every two hours a table-spoonful should be taken, and two enemata should be given in addition, each containing the sixth of a grain of opium.

Turpentine. Dr. Condie employs with success a remedy which I have never used, oil of turpentine, in doses of 10 to 20 drops, thrice daily. The effects of this remedy, he asserts, are not limited to the stomach, but extend to the whole digestive tube, ameliorating its secretions, and diminishing its painful susceptibility.

Saline enemata. Dr. Dewees states that he has used more than a hundred times, with the greatest advantage, injections composed of a solution of three tea-spoonfuls of common salt in three glasses of water, as an exclusive remedy, in order to calm the gastric excitement. I

have no personal experience on this point; but *a priori* I should feel a repugnance to employing such a remedy, for fear of augmenting the diarrhœa.

Alkalines—Vegetable acids. Jaeger advises a mixture of carbonate of potash, tincture of rhubarb, fennel water, and syrup, in order to neutralize acids, which he considers causes of the disease. Pittschaft, who sees in the disease a kind of putrefaction, advises, on the contrary, the use of acids. He prescribes half a table-spoonful of the following potion every hour: Orange-flower water, ℥ij; pyroligneous acid, ʒj; syrup, ℥j. Blasius advises chlorine water.

When the symptoms of the second period appear (coldness, smallness of the pulse, flaccidity of the abdomen), recourse must always be had to excitant tonics and cutaneous revulsives. Wine is the tonic which I prefer; I also employ the spirit of ginger, the spirit of ammonia, canella-water, and Hoffmann's anodyne. I give Port or Madeira wine in tea-spoonful doses every hour, or every quarter or half hour, according to circumstances. I alternate the wine with a tonic potion (see Case VIII.), and apply a large cataplasm, sprinkled with mustard, upon the abdomen, and other sinapisms upon the extremities. Sometimes I have the little patient enveloped from head to foot in a sheet dipped in an infusion of mustard. I allow the child to remain wrapped in this covering for an half hour or two hours, and repeat the application once or twice in the course of the day, unless the skin is too red.

M. Trousseau advises a mustard bath; the wrapping appears to me preferable; it produces more warmth. Urtication and electricity may be useful, but I have not employed them; the important point is to act rapidly upon a large surface, and to promote warmth, and, at the same time, a stimulation of the peripheric nervous system; this is why I prefer mustard to blisters, the action of which is much more circumscribed. I have applied blisters to the epigastrium, however, in some cases in which the vomiting was incessant. Aromatic and tonic, and gelatine baths have also been recommended, and I have occasionally employed them; but they occupied only a secondary place in the treatment. I may say as much of stimulant and tonic fomentations, which may be useful when the danger is not imminent; revulsives are certainly preferable in grave cases. Pommer advises that compresses saturated by a decoction of bark, of willow, oak, and aromatics, should [illegible] to the abdomen.

The child should be constantly enveloped in warm linen, and bottles of hot water should be placed near it, or, better still, it may be warmed in the bed of the nurse or mother.

The learned researches of Dr. Chossat on inanition, have demonstrated the importance of heating the body in order to preserve life. It should not be forgotten that it is during the night especially, that the tendency to coldness comes on, (according to Dr. Chossat, it is six times greater at night than in the day.) The child should therefore be watched with especial care during the night. The beautiful experiments of my learned compatriot have proved that animals have been resuscitated by heat when death was imminent. It is true that the results were prompt and complete in proportion as the animals were low in the scale, and that we cannot always conclude from the success of physiological experiments, that their imitation in pathology will be successful. But these results are sufficiently striking to demand serious consideration.

Summary.

A. When called to a child in the grave period of choleriform enteritis (incessant vomiting and diarrhœa, with or without fever), I prescribe:

1. The suspension of all food, except breast-milk, or ass's milk, or chicken soup, given when cold in table-spoonfuls every two or three hours.

2. A potion of nitrate of silver, in a manner to cause 2-5ths or 3-8ths of a grain to be absorbed in twenty-four hours.

3. Cataplasms sprinkled with mustard on the abdomen.

4. The continuation of these remedies until the diarrhœa and vomiting diminishes.

B. If the patient has reached the second stage (coldness, pulselessness, pallor, prostration, alteration of features), I prescribe:

1. That the child should be wrapped in a sheet soaked in mustard infusion, or that large sinapisms should be applied on different parts of the body, or that the child should be placed in a mustard bath.

2. Malaga wine, a tea-spoonful every half hour.

3. If the vomiting is checked, I increase the quantity of food.

4. If the diarrhœa continues and is abundant, I order an enema with four or five drops of laudanum.

5. I stop the applications of mustard and the wine as soon as reaction is obtained; if the diarrhœa persists, I continue the injections, or else give a large dose of subnitrate of bismuth.

C. In case the symptoms are less urgent, I employ at the commencement the treatment of the mild form, (calomel and bismuth;) but I instantly substitute the nitrate of silver for the bismuth, if the condition of the patient becomes worse.

Cerebral enteritis. The indications are not the same as in the preceding form. The diarrhœa and vomiting play here only an accessory part; there is no coldness. The whole danger of the disease lies in the spinal and cerebral nervous system. The treatment of the eclampsia therefore is chiefly to be considered.

I advise in the convulsive variety:

1. Small doses of calomel.
2. Cataplasms on the abdomen.
3. Bran baths.
4. Leeches behind the mastoid apophyses, if the convulsions are violent and frequent, and accompanied by intense febrile symptoms.
5. The incision of the gums if the case require it.
6. Absolute diet during the acute stage.

In the meningeal variety I advise:

1. Small doses of castor oil or syrup of manna, if constipation exists; minute doses of calomel, if diarrhœa occurs.
2. Bran baths and cataplasms.
3. The oxide of zinc, if the nervous condition is manifest, either alone or combined with the magistery of bismuth if diarrhœa is present.
4. The regulation of the diet.

ART. II.—*Surgical Cases successfully treated.* By JOHN P. METTAUER, M. D., LL. D., Professor of Surgery in the Medical Department of Randolph Macon College.

Exostosis of the Left Superior Maxillary Bone requiring Resection.—The subject of this case was a negress, ætat. 17, of good general health, until the commencement of the disease of the bone, and of

a well developed person. The history of the case represents its beginning to have been marked by the gradual enlargement of the maxilla, without pain or even much uneasiness; and that it commenced about a year and a half before I saw it. On examination I found the bone had become so much enlarged as to compress the corresponding eye, and actually to displace it in some degree from its socket. It had also impinged against the opposing wall of the nose so as to close the nostril entirely. The affected cheek was fully three times its natural size; and by reason of the extraordinary development it had undergone, the countenance now assumed a most ghastly and unpleasant expression. The general health had in a degree deteriorated, as was manifested by impaired appetite and digestion, increasing debility, and a tendency to anæmia. The tumefaction, on its exterior, was uneven and lobulated, but the whole surface was hard and resisting. It overhung the connections of the maxilla with its fellow, as well as with the malar and palatine bones—the disease seeming to have extended to those bones. Within the mouth the tumefied bone had become greatly developed also, nearly filling half of that cavity. The dental border had entirely lost its original form, and had become greatly expanded; yet the teeth were retained by the gums, though quite loose in their sockets; they are still in the sockets of the morbid specimen now in my possession. The voice was much changed by reason of the closure of one nostril, and the diminution in the calibre of the other.

I regarded the case as exostosis, and as the tumefaction continued progressively to augment, the resection of the diseased maxilla was determined on as the only expedient likely to afford relief. The operation was performed in the following manner on the 10th of June 1852: The woman was placed recumbent, with the head and shoulders somewhat elevated and inclining to the right side, so as to prevent the accumulation of blood in the mouth during the operation. Several strong assistants held the hands, lower extremities, trunk and head. Standing on the right side, and partly in front of the woman, I commenced the operation by making a curvilinear incision from the angle of the mouth of the affected side to a few lines beyond the malo-maxillary suture. The flap was rapidly dissected, and firmly drawn up over the eye by an assistant and held. Having now completely exposed the surface of the diseased bone in every portion of its exterior, I next divided the lining of the roof of the mouth along the line of union with its fellow, as well as at the palato-maxillary junction, quite

down to the bone. After clearing the mouth of blood, the bone was separated from its fellow by straight bone-cutting forceps; a strong scalpel, and a chisel. Next the palato-maxillary connection was opened, by forcing the point of the scalpel between the bones and prizing them apart; lastly, the malo-maxillary junction was separated by the chisel. Taking hold of the diseased maxilla with the hand and rocking it, the other connections were readily severed; yet the bone could not be removed from its situation, even by the employment of very considerable force, until it was divided into several pieces. This was effected with a strong scalpel, and with much less difficulty than might have been expected, by reason of the softened and spongy condition of the bone. The form of the degenerated maxilla, when examined after its removal, accounted satisfactorily for the difficulty in getting it away. The bone had become so much expanded and elongated in the direction of the zygoma, and behind and below the malar bone, as to form a complete dovetail in that region, which effectually prevented its dislodgement until cut to pieces, as already stated. The constitutional effects produced by the sundering of the bone from its fellow were overpowering and alarming in the highest degree. With the opening of the maxillary connection syncope occurred and continued for nearly half an hour; during which long period it could not be perceived that the respiratory or circulatory functions were performed. For more than an hour not the slightest pulsation could be distinguished at the wrist. By the energetic employment of volatile stimulants to the nostrils and face, and friction to the extremities, resuscitation finally came on. After a delay of an hour, reaction was fully established, the operation was completed, and the huge maxilla was entirely removed. Comparatively there was slight hæmorrhage. It was only necessary to take up three arteries, which were branches of the superior maxillary and facial; they were unusually small. The wound was cleansed of blood and filled with lint, medicated with alum in fine powder. I now approximated the margins of the wound and confined them in exact contact with eight points of the interrupted suture, and a like number of adhesive strips. A thick wet compress was then laid on, and the whole confined with a bandage. The woman was now removed from the table and placed in bed, resting partly on the side of the wound, so as to allow the blood to flow readily from the mouth as it oozed from the wounded surface. A narcotic was administered as soon as the woman was properly arranged in bed. For half an hour there was considera-

ble restlessness, and the patient tossed and moaned almost incessantly, complaining at the same time of distressing thirst, notwithstanding pounded ice and iced water were freely used. At length, under the influence of the opiate, she passed into a pretty quiet slumber, that continued four hours. As soon as possible after she awoke a cathartic was administered, that acted freely in six hours, procuring copious consistent evacuations, and the patient was greatly relieved and composed. Very moderate traumatic inflammation and fever followed. The water dressing was used the first three days. At the expiration of this time the lint, with which the wound was filled, becoming somewhat loose, was partly removed through the mouth, and it manifested evidence that suppuration had taken place on the surface of the wound. At this time, too, the exterior of the wound was examined, and it was found that nearly every part of it had united perfectly. The water dressing was resumed. On the fourth day the ligatures being cast off from the arteries, they were drawn away; and the remainder of the lint was removed from the cavity of the wound, which now suppurated freely. On the seventh day the sutures being no longer necessary were cut and drawn away. The cure advanced rapidly under the water dressing, a restricted diet, and the occasional administration of an aperient. In three weeks the wound had entirely healed, and, contrary to all expectation, entailed upon the woman very slight deformity of the cheek. Indeed there was no other marked difference in the form and appearance of the cheeks than what was caused by the cicatrix, which was slightly depressed below the level of the surrounding surface. The paralysis of the face, from the division of the remote branches of the facial nerve, was slight, and had, in a great degree, disappeared before the woman left the Infirmary. At the date of this paper I learn that the woman remains well, now more than a year subsequent to the operation.

Some years since I removed two-thirds of the right superior maxillary, including the antrum and alveolar process, to the mesial line, without laying open the mouth, in a case of exostosis, with complete success. The recovery was rapid and the cure complete. I was enabled to reach the diseased parts of the bone merely by dilating the corresponding side of the mouth, by drawing the angle and upper lip backwards and upwards with the finger hooked in the corner of the mouth. The diseased bone was then cut away with the gauge, chisel, cutting forceps, and bone knife, used in alternation as they were required. The wound was filled with medicated lint.

Imperforate Vagina. The subject of this case was a very likely young negress, ætat. 18, well grown, and remarkably robust. I could learn nothing of the early history of the imperfection, and it is probable little, if anything, was known of it until the subject had arrived at the age of womanhood. At this period she began to experience periodical pains through the region of the uterus, hypogastrium, hips, loins, and head; but they were regarded as the precursors of menstruation, and were medicated accordingly. After several returns of these periodical pains, without the catamenial flow, apprehensions were entertained that there might be something abnormal in the development of the sexual organs. Accordingly an examination was made, first by the girl's mother, and subsequently by persons better informed, and more capable of appreciating the condition of the woman. Now the true character of the case became known, and the periodical pains were explained. For some months before the case came under my observation, the periodical pains had greatly increased in intensity; the two last attacks especially had induced convulsions and temporary insensibility. My examination left no doubt as to the case being an example of complete absence of the vagina as a congenital imperfection; and this opinion was corroborated by a remark of the girl's mother, after she found there was no vaginal outlet, "that the organ was unlike that of other female infants, as it was entirely closed from birth;" and, also, by the condition of the parts along the usual course of the vagina, as I ascertained during the performance of the operation.* The pudendum, if it may be so denominated, consisting as it did of the traces of such an organization, only presented an elliptical depression or dimple, bounded above by the clitoris and its prepuce; below by the fourchette; and on each side by the labia majora. The clitoris was exceedingly diminutive; and the labia presented a mere border on the sides of the shallow cavity they partly bounded. A very delicate mucous membrane, of the ordinary appearance of the lining of the os externum, invested the pudendal depression, and yielded a copious secretion during the examination, similar in all respects to that ordinarily effused by the parts. This cavity, an inch and a quarter in length, was constantly covered by its labial borders—when undisturbed by pressure or motions of the body calculated to separate them—and was

* The structures along the passage that I formed were loose and entirely free from hardness of every kind, especially such as might be expected to exist had the vagina been obliterated by adhesion.

exceedingly sensitive to the touch. That the woman possessed sexual appetite I had no reason to doubt. She had never menstruated externally for the best of reasons—no vagina existing to convey the catamenial secretion from the uterus outwardly; but the periodical symptoms evidently indicated that catamenial efforts were made. In consequence of several violent returns of pain during the last few months preceding the time of my examination, fears were entertained for the safety of the woman unless menstruation could be established, and these apprehensions induced the owner of the woman to consult me as to the propriety of subjecting her to a surgical operation as a means of relief. After a careful examination by the rectum and bladder, and reference to the character of the periodical pains; sexual appetite; and catamenial fulness of the hypogastrium and mammæ, I gave it as my deliberate opinion that a uterus existed, and that an operation would be safe and justifiable—and it was executed in the following manner on the 15th day of March 1853: The woman was placed as in the position for lithotomy, the bladder and rectum having a short time beforehand been emptied. I passed a large female sound fairly into the bladder, with its convexity gently pressing down upon the cervix and urethra, in which position it was held by an assistant. Next a large gum bougie, well oiled, was introduced into the rectum quite up to the hollow of the sacrum, and there held by the left hand of the same assistant. I now pressed the external labia apart with the thumb and index finger of my left hand and opened a deep incision from just beneath the meatus quite down to the fourchette, taking care not to wound the rectum. The incision being deepened somewhat and pressed open with the finger and thumb so as to bring its bottom fairly into view, the operation was continued by incising horizontally, and from left to right, so as to form a tract intermediate between the opposing surfaces of the urethra and cervix vesicæ above, and the rectum below. The incision was formed fully an inch and three-quarters in width, and extended quite up to the os tincæ, but was contracted to half that width a little anterior to its termination at the orifice of the uterus. By carefully directing the point of the knife, with the extremity of the left index finger placed against the sound in the bladder, and the bougie in the rectum alternately, and with very moderate pressure, little difficulty was experienced in the dissection, and all danger of wounding the urethra, bladder or rectum completely guarded against. In order to operate safely, the dissection was performed by very light touches of

the knife, so as to cut only a few lines deep at a time. Comparatively little pain was experienced from the operation, which required about fifteen minutes for its execution; and was attended with inconsiderable hæmorrhage. After the dissection was completed I carefully explored the new passage, and found it, in all respects, what I designed it to be, a free conduit from the uterus. I distinctly felt the os uteri. The blood was now washed away, by forcibly injecting cold water repeatedly into the passage, with a large penis syringe. I now filled the wound quite up to the os tincæ with a hollow tent, or rather a bougie, formed of wax moulded over a large tube; and the bougie was large enough to cause some distension of the passage, and curved to correspond with the hollow of the sacrum. In this condition it was confined with a T bandage for four days. An hour after the bougie was applied an opiate was administered, which procured for the woman a good sleep of four hours. At bed time a cathartic dose was given, which acted moderately before morning, as well as two or three times during the early part of the day. Purging was repeated the next day, and on alternate days afterwards, three times. On the fourth day the bougie was removed, the passage washed out, and a larger tent introduced to remain two days. After this time the bougie was removed daily, but reapplied after the space of two hours; and the vagina, as it now must be termed, was carefully washed with cold water. On the 7th day after the operation there was a considerable discharge of dark coagulated blood from the new vagina, attended with pain and decided uterine nisus, which was followed by a natural menstrual flow that lasted three days. From this period the recovery was rapid. The daily introduction of the bougie, to be retained fully two hours at a time, was directed to be kept up for at least six months. Nothing untoward occurred during the whole treatment; and when the woman left the Infirmary she was cheerful, and expressed her gratitude in the warmest terms for the services that had been rendered her.

Prince Edward Co. Ho. Va., July 30, 1853.

CHRONICLE OF MEDICAL SCIENCE.

The translations and abstracts under this head, are made expressly for this Journal.

PHYSIOLOGY.

1. *Generalities of the great sympathetic; its relations to the cerebro-spinal nervous system; sensibility and recurrent or reflex movements; muscular irritability; proper reflex actions; isolated functions of the great sympathetic.* By CLAUDE BERNARD.

The nervous system, long before Bichat, was divided into two parts, but the distinctions employed by this illustrious author are now no longer in use. Instead of saying nervous system of animal life and of organic life, M. Bernard prefers to say, *cerebro-spinal nervous system* and *great sympathetic nerve.* The first is composed of the cerebrum, the cerebellum, the spinal marrow and the nerves emanating from it; the second is constituted by a series of ganglia forming, upon the sides of the vertebral column, a chain stretching from the head to the pelvis, the links of which are connected by nervous fibres. The posterior part of the great sympathetic communicates with all the cerebral and spinal nerves. The principal plexuses are placed in the ellipse of the anterior part, the solar being the most considerable. The fibres of the great sympathetic in their connection with the cerebro-spinal system presents an extreme *intricacy*, which however is not the same in all animals. It differs, for example, in the dog and rabbit; in the former, being confused with the pneumogastric, which is not the case in the latter. This difference enables us to choose sometimes the one and sometimes the other animal, according to the object of the experiment.

In respect to the *anatomical structure*, there is little difference between the two nervous systems. The microscope demonstrates no notable difference. There are thirty-one pairs of spinal nerves, each pair starting from the spinal marrow by an anterior and posterior root, the anterior root having no ganglion. The structure of the two roots is the same; M. Robin and other micrographists have found nervous tubes of simple and double contour, the single tubes being less numerous in the posterior root. These tubes are also found in the great sympathetic, the simple ones being in greatest quantity, without, however, there being a deficiency of the others.

Grey fibres are found in the great sympathetic, and it has been sought to distinguish this nerve by this character; but many modern anatomists agree in regarding these grey fibres as the neurilemma; they

are called the *fibres of Remak.* The grey fibres being more voluminous in the great sympathetic, gives it a thicker corresponding neurilemma, but they are considered cellular tissue, though of a special nature, it is true.

In the cerebro-spinal nervous system, *the conductors of motion and sensation are isolated.* The anterior root presides over motion, and the posterior root over sensation. The two roots however are characterized by a delicate sensibility, but it is not manifested in the anterior root, except in describing a circuit. This is what constitutes the *recurrent sensibility* discovered by M. Magendie, the proof of which is given in the power to destroy at will sensation or movement.

Experiment. M. Bernard exhibited a rabbit upon which he had cut, on the left side, the nerve of the fifth pair corresponding to a posterior root, and essentially controlling the sensibility. The nostril and the superior lip of this side evinced no sensibility when they were pinched, while upon the right side the slightest touch with the forceps upon the same parts or upon the interior of the nostril caused immediate sensation. At the same time both nostrils and lips preserved their normal movements, for the facial was intact. Notwithstanding this distinctness in the phenomena of motion and sensation in the cerebro-spinal nervous system, no animal can exist without their consentaneousness, for they both contribute to the same end. It is certain, however, *that the movement accomplished by the muscle and the nervous action are two distinct things.* This distinction was remarked by Haller, who admitted an irritability proper to the muscular fibre. When a muscle contracts it is not the nerve which gives it the contractile power; the nerve is only the occasion, for the muscle can contract of itself. This fact, however, was difficult to demonstrate. It could not be done by means of galvanism; for when the muscle was made to contract, it might be said that the movement was produced by the nerve; and when the action of the nerve might be extinguished, the muscular irritability might be gone also.

It was thought that by the aid of chloroform some light might be thrown upon the different functions of the nervous system; but in extinguishing the sensibility of the cerebro-spinal nervous system, that of the great sympathetic would also be extinguished. It even exercises its influence after death upon man and the lower classes of animals. M. Gosselin has established the fact that the movements of the ciliary epithelium of the trachea and œsophagus persisted 36 or 48 hours after the death of convicts. M. Clemens, by means of chloroform, has succeeded in extinguishing these movements; he has also caused these movements to disappear in the epithelium of the œsophagus of the frog. The same experiment has succeeded when the anæsthetic was placed in contact with certain vegetables, such as *memosæ*, and especially the sensitive plant. When chloroform is applied to the latter it no longer closes its leaves.

To make the distinction of the phenomena of nervous excitability and muscular irritability evident it was necessary to have an agent, the energy of which was less general. Such an one M. Bernard found

in the *woorara poison*, which extinguishes the first and leaves the second intact. M. Bernard proved that muscular irritability was independent of nervous excitability, in the following manner: He introduced a small fragment of *woorara* under the skin of a frog, placing the latter under a glass vessel, when it died in a few minutes. He took another frog and skinned it and cut off its head. The difference in the action of galvanism upon the two was as follows: The second frog contracted its muscles, whether these or the nerve was touched by the galvanic point. Taking the first frog, M. Bernard washed away the excess of the poison, and skinned it by means of the forceps and scalpel, in order to avoid accident from contact with the poison. Touching the muscles, he found that they preserved their irritability and contracted; *but there was no contraction when the nerve was touched.* This double experiment decided positively the question. There is then a muscular irritability independent of the excitability of the nerves. Contraction is a property of the muscle; the nerve only determines the muscle to act in a given time. The movement is but the result of multiple actions, the causes of which are to be considered.

Taking first the study of *reflex actions* properly speaking, M. Bernard asks how sensation produces the movement. These phenomena have long ago attracted attention. Prochaska mentioned them first. M. Magendie designated them under the name of *unconscious sensibility;* M. Lallemand, under that of *spinal movement.* Marshall Hall has introduced the expression *reflex motion*, which has superseded the others. Everybody knows now in what it consists, the question is to explain it.

Experiment. M. Bernard exhibited a frog, the spinal marrow of which had been cut. It could not move its posterior half. Nevertheless if the feet were pinched they immediately retracted. The sensation produced by the pinching determined a movement that the will could not produce. Such is a reflex motion.

It has been said that the excitation produced by the pinching was transmitted to the spinal marrow by means of the posterior root, and from these to the anterior roots. In support of this, Marshall Hall contends that there are communicating fibres between the roots; but these fibres are not acknowledged by all. Besides, the action of the pinch, only being extended to a given point of the skin, could not act upon all the motor roots which are brought into play. That proves that the movement which results is produced by a sensation. The quantity of the movement is not in relation to the quantity of the nerves touched. The quantity of the movement depends upon the amount of energy retained by the animal, which energy is exhausted by degrees. It would seem that there was a certain force which accumulated in the spinal marrow by repose, for the next day the frog, instead of being exhausted, contracted more vigorously; the excitation by means of pinching producing more marked effects. These effects, however, soon disappear. But *if the posterior root is cut there is no more movement.* This root presents two distinct portions; one formed by the filaments which traverse the ganglion; the filaments of the other

portion passing below the ganglion. *If this ganglion be removed, all reflex motion ceases.* As the ganglion is outside the canal, its ablation is easy. But if the intervertebral ganglia be wounded in a frog, the possibility of transmitting the excitation is destroyed. It is these ganglia then which are charged with this function. Strychnine, which produces tetanus, acts specifically upon these ganglia. The violent convulsions which are the result of its action are increased when the animal is touched, or even when the table is moved upon which it is placed.

Experiment. M. Bernard introduced, under the skin of the thigh of a frog, a little of the alcoholic extract of nux vomica. Convulsions manifested themselves in a few moments. As soon as the frog was touched the agitation increased; and the same effect was produced whenever a movement was communicated to the table. Death does not fail to occur; but this is not caused by default in the respiration, as has been said, for if the lungs are removed the frog does not cease to live, the respiration taking place by the skin. It is the convulsions which exhaust the nervous force. *If the spinal marrow and the posterior roots be destroyed the convulsions cease.*

Are there not in these experiments some applications which may be made to nervous diseases, such as hysteria and epilepsy. These diseases only appear singular and obscure because the root of the question relative to the functions of the nervous system has not been touched. To understand it properly, it is not only necessary to search out the relation which exists between the nerves of sensation and of movement, as between the two nervous systems, cerebro-spinal and great sympathetic, but it is requisite that their separate actions be observed.

With a view of elucidating this subject, M. Bernard sought to isolate the phenomena which depend upon the great sympathetic, from those which are under the influence of the cerebro-spinal system. The artificial respiration employed by Legallois and Brodie was one of the means used by him. But these distinguished experimenters did wrong in killing the animal by cutting the medulla oblongata, for then artificial life could neither be sustained completely or for a sufficient length of time. In killing the animal it was necessary to respect this vital medium. M. Bernard had the idea of destroying life by a sudden blow; but he found, in the *woorara*, a more certain and effectual means for experiment. It is known that this toxic extinguishes nervous excitability completely; but, what is remarkable, it does not extend its action to the great sympathetic, and this circumstance gave M. Bernard an opportunity for examining in their isolated condition the functions of the latter system. He demonstrated that, upon a dog destroyed in this manner, by resorting to artificial respiration the action of the sympathetic upon certain organs, especially those of secretion, could be diminished or increased at will. The urinary and lachrymal secretions could be made more abundant than when the animal was in its normal condition. The secretion of sugar in the liver was so much increased that in less than an hour the animal was diabetic. This demonstration was made before the class.

Experiment. A dog, of middle size, poisoned before the lecture with the *woorara*, was in the act of drawing his last breath. M. Bernard having placed him upon the table, opened the trachea and adapted to it a tube communicating with a bellows. The blood was black, and there was no longer respiration. The insufflations were commenced in imitating the movements of respiration. The blood became red; the eyes, which were dull, became animated and sensible to light. The insufflations were suspended when the phenomena of death again manifested themselves; the blood became black again. Applying the mamometre of M. Magendie, it was proved, by the elevation of the mercury, that as the insufflations were begun and continued, so the pulsations of the heart returned and acquired a greater intensity. The warmth persisted. The muscular contractions were reproduced. The phenomena relating to the secretions returned; but the time not allowing farther experiment, the animal was thrown aside, still exhibiting signs of life.—*To be Continued.*—(*L' Union Medicale.*)

MATERIA MEDICA AND PHARMACY.

2. *On the Therapeutic Properties of Yellow Jessamine.* By Dr. BATCHELOR.

The yellow jessamine (*Bignonia sempervirens, of Linnæus; Gelseminum sempervirens, of Jussieu*) possesses undoubted remedial properties in a large class of diseases.

It has been used in neuralgia, rheumatism, intermittent, remittent and typhoid fevers, in pleurisy and pneumonia, in chorea and epilepsy; and in many cases with excellent results.

The gelseminum has a slight narcotic odour, and possesses narcotic, nervine, anti-spasmodic and sedative powers. In full doses, it produces a sort of intoxication, languor, dizziness, double-vision, inability to raise the eye-lids; and in an over-dose, complete muscular prostration. As a sedative, I consider it superior to digitalis, sanguinaria, or veratrum viride; it possesses the advantage of being by no means unpleasant to the taste, and of not producing nausea.

A nostrum called the "electrical febrifuge" is prepared from this article, disguised by essence of wintergreen.

I prepare the medicine in the following manner: A bottle is loosely filled with the bark of the fresh root; equal parts of whiskey and water are added, and the bark is macerated for fourteen days. Twenty to sixty drops of this infusion may be used at a dose, alone or combined with quinine.—(*Trans. of Ala. Med. Assoc.*)

3. *On Adulteration of Sulphate of Quinine.* By Dr. MOLL.

The excessive price of the true cinchona, the calisaya of Bolivia, has led to the substitution of many inferior kinds, chiefly remarkable for their containing large proportions of *quinidine*. In consequence of their lower price they have obtained admission to the quinine manufactories in large quantities, and much of the sulphate now produced is depreciated by the addition of quinidine. This substance differs from the sulphate of quinine by its greater specific gravity and less flocculent crystallization, and it is much more soluble than it in water and alcohol. The addition of both *cinchonine* and *quinidine* may be detected by means of ether; for while cinchonine is almost insoluble in this substance, quinidine is so in a far less degree than is quinine, inasmuch as sixty drops of ether and twenty of ammonia will dissolve ten grains of quinine and only one grain of quinidine. On the addition of these quantities of sulphuric ether and liq. ammonia, to ten grains of quinine, with ten drops of dilute sulphuric acid, and fifteen of water, all will remain dissolved, unless cinchonine, or more than 10 per cent. of quinidine, be present, the mechanical impurities only appearing at the surface. If 10 per cent. of quinidine be present in the ethereal solution, it will soon crystallize on the surface of the ether. Traces of this substance can be yet more certainly discovered if ether saturated with quinidine be employed, when all that exists in the suspected salt will remain insoluble. If the powder contain cinchonine, or more than 10 per cent. of quinidine, it will remain undissolved at the line of demarcation of the two fluids. If it be quinidine, it is soluble in additional ether, which cinchonine is not.

To establish the purity of quinine, we must also assure ourselves of the absence of *inorganic* substances, by calcination in platina, or by a solution of the salt in alcohol. Sulphate and carbonate of lime, magnesia, &c., remain undissolved, while boracic acid, though soluble, betrays itself by its blue flame on conflagration. The absence of *organic* substances, as salicine, sugar, starch, stearic acid, is known by the colourless solution which takes place in concentrated sulphuric acid. The presence of *ammoniacal salts* is revealed by the odour which ensues on the addition of caustic alkali.—*Revue Medico-Chirurgicale*, xii. 238.

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4. *Effects of Nux Vomica upon the Economy.* By M. LEGRAND.

For twenty years I have employed, in imitation of the German physicians, the powder of roasted nux vomica in gastralgia and gastro-enteralgia. I have used still more frequently the aqueous extract of nux vomica, which, in consequence of the slight solubility of strychnia in water, contains very little of that alkaloid. These two preparations, administered in proper doses (from the fifth of a grain to four grains at the utmost), and augmented gradually, have never produced the slightest accident; and by means of them, I have almost invariably re-

lieved and often cured those nervous affections of the stomach, which are so frequent, and which present sometimes such strange forms.

Having occasion to employ the aqueous extract of nux vomica combined with the oxide of gold by potassa,* in a case of headache, depending no doubt upon derangement of the stomach, my patient was prevented from taking the medicine by a physician of great distinction, who feared the toxic effects of the preparation. I could only reply to this objection by direct experiment, and I resolved to take the medicine myself. I commenced with one grain, and augmented the dose a fifth of a grain daily, until I took ten, and finally fifteen grains every morning.

From these experiments I feel at liberty to conclude: 1. That the aqueous extract of nux vomica exercises a generally salutary action upon the digestive functions; 2. That no ill effects need be apprehended from it if the dose is not increased beyond two grains morning and evening; 3. That its toxic effects do not commence to manifest themselves until the dose is augmented to eight or ten grains taken while fasting, because they are inappreciable if the remedy is administered immediately before a meal, and are not very perceptible until the dose is raised to fifteen grains; 4. That the toxic effects are temporary, and disappear with facility, and that the economy soon becomes habituated to the remedy; 5. That the extract of nux vomica exerts its principal therapeutical effects upon the glanglionic system, upon the nerves of organic life, and its toxic influence upon the spinal cord, and that it has scarcely any influence upon the brain.—*Compte-rendu de l'Acad. des Sciences.* May 30th.

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5. *Hæmorrhage from the Throat produced by Cod-liver Oil.* By Professor GAMBERINI.

Many pathologists have accused cod-liver oil of causing hæmoptysis, but as this symptom is so common in those suffering from pulmonary tubercles, it is difficult to determine whether it is due to the remedy, or to the ordinary effects of the disease itself. In order to obtain a positive solution of this problem, it is necessary to study the phenomenon in question in individuals using the remedy, who are exempt from any disease of the respiratory organs. It is upon such data that Dr. Gamberini has endeavoured to discover the truth.

* The following is the formula:

℞. Oxide of gold, gr. x.
Aqueous extract of nux vomica, gr. xxv.
Extract of orange peel, gr. lv.
M. S. A. Make fifty pills.

[The preparation of gold recommended, is that prepared according to the formula of M. Figuier, by precipitating a cold solution of chloride of gold, rendered strongly alkaline by potassa, with a solution of chloride of barium. The precipitate, consisting of aurate of baryta, is then treated with dilute nitric acid, which dissolves the baryta, and leaves the oxide of gold pure. See *Jour. de Pharm.*, Dec. 1847. ED.]

Every physician who prescribes cod-liver oil is accustomed to hear his patients complain of a sense of heat and burning in the throat, which varies in duration and intensity, and sometimes makes it necessary to suspend the use of the remedy. If the fauces are then examined, a deep redness will be observed, extending over the whole of the superior portion of the pharynx, over the palatine arch, and the tonsils. The capillaries appear engorged; sometimes the epithelium is apparently removed.

When this condition occurs, a transudation of blood often supervenes, to the patient's great alarm, and the no small embarrassment of the physician. The blood sometimes scarcely colours the saliva, and sometimes forms considerable coagula. The hæmorrhage is often preceded by pruritus and cough. If the remedy is persevered in, notwithstanding these symptoms, the hæmorrhage increases. On the contrary it ceases promptly when the medicine is suspended.

Auscultation excludes the idea of an alteration of the bronchial mucous membrane, or of the pulmonary tissue, a negative proof which, when combined with direct inspection, is sufficient to enable us to assign to this hæmorrhage its true seat and cause.

The researches of Dr. Gamberini will doubtless, as a first result, inform practitioners of the possibility of this accident, and the change of prescription which it indicates. Pereira and Cartoni teach that cod-liver oil should be rejected in the treatment of phthisis, because it favours the recurrence of hæmoptysis. Is it not very probable, if the foregoing explanations are correct, that these authors have been deceived in regard to the phenomenon, and have mistaken a *staphylorrhagia* for the hæmorrhage caused by the softening of tubercles? This question acquires great importance from the fact that cod-liver oil is probably the best remedy for certain forms of phthisis, and that consequently, it would be most unfortunate to attribute to it dangers which it does not possess, and to deprive ourselves of a precious resource against true hæmoptysis, in consequence of chimerical apprehensions.

Bulletino della Scienze Mediche. (*Gaz. Med. Paris.*)

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6. *Anæsthetic Properties of Lycoperdon Proteus—Common Puff-Ball.* By Mr. B. W. Richardson.

At a recent meeting of the Medical Society of London, Mr. Richardson remarked that his attention had been directed to the fact, that the smoke of the common puff-ball was used in the country for stupefying bees, and the idea struck him, that it would be worth while to ascertain if the same agent would produce narcotism in higher classes of animals. Several weeks since, he commenced a series of experiments with the fumes of the fungus, and had continued them to the present time. He found it possible to produce the most perfect anæsthesia with the fumes. His experiments had been made on dogs, cats, and rabbits, and had been witnessed by Drs. Willis, Crisp, Cormack, Snow,

and several others. He had administered the narcotic fumes in the impure state, and in a clarified state obtained by passing them through a solution of caustic potass. When an animal was exposed to a large quantity of the narcotic vapour, the narcotism came on very speedily, and the insensibility was most decided, but recovery soon took place. Dr. Willis and Mr. Richardson had removed a large tumour from the abdomen of a dog that had been placed under the influence of the narcotic. No sign of pain was shown during the operation, and the animal did well afterwards. The fumes were obtained by burning the fungus. When a moderate quantity was inhaled slowly, the narcotism came on and passed off slowly, the animal exhibiting all the symptoms of intoxication, with convulsions, and sometimes vomiting. Several animals had been intentionally destroyed by the narcotic. It destroyed life slowly; a dog would often inhale the fumes for twenty minutes or half an hour after being completely narcotized, previous to expiring. The heart's beat in all cases survived the respiration. The lungs after death were pale; there was no sign of congestion in any organ, the blood retained its red colour, but did not coagulate quickly; cadaveric rigidity set in in two or three hours. During recovery from a protracted narcotism, an animal would sometimes be quite conscious, but insensible to pain. Mr. Richardson had himself inhaled the clarified fumes of the fungus; they produced in him symptoms of intoxication and drowsiness, but he did not breathe them long enough to become completely narcotized. Mr. Richardson was able to afford but little information as to the nature of the narcotic agent contained in the fumes. Many of the fungi possessed narcotic properties, and had been supposed to possess an alkaloid resembling morphia; but the subject had never been thoroughly investigated. He should only say, concerning the narcotic principle contained in the puff-ball,—1st. That it was of a most volatile nature; 2dly. That it was not absorbed by alcohol, water, or strong alkaline solution; 3dly. That if the fungus was burned in oxygen gas, the narcotic principle still remained in the fumes, and produced its effect, if free oxygen was breathed with it. The fungus had been given internally to two animals without effect. In Italy, it was fried and eaten as food. In conclusion, Mr. Richardson said, that he had been anxious only to show that a volatile narcotic principle, capable of causing anæsthesia by inhalation, did exist in one of the fungi; it remained to be seen whether other fungi possessed a similar principle, and whether from a fungus an anæsthetic could be obtained that might be used in practice, with as little trouble to the operator and with less danger to the patient than ether or chloroform.

Dr. Snow corroborated Mr. Richardson's observations, having witnessed several of his experiments. There could be no doubt that the fungus did possess a very volatile narcotic principle, capable of causing insensibility to pain. As yet, however, the narcotic was not so practicable as chloroform. The subject deserved and required further research.—*Medical Times and Gazette*, June 11th, 1853.

7. *Of the Therapeutic Properties of Datura Stramonium.* By M. MICHEA.

The datura stramonium, vulgarly called *Jamestown weed, thornapple, pomme épineuse,* is an annual plant, of the order solanaceæ. It is probably a native of India (for the Sanscrit authors mention its therapeutical properties), whence it probably passed into Persia, Europe, Africa, and America. Others regard South America as the country of its origin. However this may be, it has been found for many centuries in France, in Greece, in Barbary, in Asia Minor, etc. * * * *

In moderate doses stramonium causes slight vertigo, and a tendency to drowsiness. If it is given in rather larger quantities, it diminishes muscular energy, benumbs the sensibility, obscures vision, dilates the pupil, accelerates the pulse, augments the heat of surface, produces slight delirium, and especially hallucinations; it causes cephalalgia, thirst, burning in the pharynx, diarrhœa, and slight diuresis. All these effects pass off in a few hours.

The property which stramonium possesses of causing hallucinations and profound sleep, to which almost complete obliviousness succeeds, has made it celebrated in the annals of crime, and of the occult sciences. It was employed by the magicians and sorcerers when they wished to delude the credulous and superstitious individuals who came to consult them.

The infusion of the seeds of the plant in wine does not change its taste, and quickly induces intoxication and sleep. Wretches formerly employed it to aid them in perpetrating thefts, and violating female chastity. Garidel relates that an old woman was burned at Aix, for having administered this preparation to several young ladies of noble family, and betraying them to libertines during their delirium. There are other instances in which girls have been dishonoured, after being made insensible by this drug. Instead of the vinous infusion the powdered seeds mixed with snuff have been used for nefarious purposes.

According to the experiments of M. Maly of Grætz, stramonium in large doses, is a powerful aphrodisiac. Faber asserts that the Indians, Arabs, and Turks, make stramonium an ingredient in their love-philtres. It is certain that, in the cases of ten lunatics, to each of whom I administered from one to five grains of extract of stramonium daily, I twice observed that it produced an extreme inclination to indulge in venereal pleasures. In one of these two patients, a voluptuous sensation at the extremity of the glans supervened, and nocturnal emissions and masturbation were the consequences; habits to which the patient was totally unaccustomed, and which he confessed with great shame. The other patient was a woman of sixty. Whenever, in her case, the dose of the extract of stramonium was increased to four grains, she experienced a titillation in the sexual organs, which was followed by an attack of nymphomania, during which she used the most obscene and infamous language.

At a poisonous dose, stramonium causes stupor, enormous dilatation of the pupils, furious delirium, always accompanied by hallucinations;

spasms, wakefulness, heat of throat, inability to swallow; the skin is sometimes covered by a scalatiniform eruption.

At the autopsy, the stomach is red, and the brain injected.

When one is called in time to an individual who has ingested large quantities of stramonium, an emetic should be given, and subsequently drinks acidulated with vinegar or lemon juice. A blister to the neck is very useful in correcting the dilatation of the pupils and temporary blindness.

Therapeutical action. Störck first introduced this plant into medicine. Before his experiments (1762), it was only known that it possessed dangerous properties, and its toxic powers were singularly exaggerated, for it was pretended that intoxication was produced by simply smelling its flowers. Störck was induced to use the thornapple *a priori* and not empirically. Because the plant impressed the nervous system powerfully, he considered that in the neuroses it might operate in that apparatus a change which would restore its proper action. Hence he used it in convulsions, epilepsy, and mania, with various results. But, of all practitioners, an American physician—Dr. Barton, has collected the most facts in favour of the remedy.

Asthma. In England, stramonium is employed as a domestic remedy in asthma. According to Dr. Royle, medical works in the Sanscrit language, speak of the smoke of thornapple as a cure for asthma. The practice is common in the East Indies, and Dr. Dusseuil has observed it in Java. Dr. Anderson, who practiced medicine at Madras, introduced this practice into Europe, at the commencement of this century. Since then Drs. English, Meyer, Trousseau and Pidoux have used it and vaunted of its salutary effects. Krimer recommends it in asthma uncomplicated with disease of the heart or lungs. In these cases he considers the smoke of stramonium a real specific.

The opinion of MM. Trousseau and Pidoux is less positive, in regard to a radical cure. "The influence of datura stramonium upon essential asthma, say these authors, is almost miraculous during the early months, and even during the first years of its employment. But if the disease is grave, if it recurs frequently, the datura gradually loses its power of moderating the attack." It is certain that the smoke of datura inspired deeply and frequently, assuages the paroxysms of asthma, and moderates the intensity of the dyspnœa.

Dr. Christie, physician to the hospital of Ceylon, has employed with the greatest success, the datura fastuosa used like tobacco in pipes.

Phthisis and pulmonary Catarrh. Fumigations of stramonium are also efficacious in the treatment of many of the symptoms of these affections; they calm the cough and oppression, and facilitate expectoration.

Neuralgia. After spasmodic asthma, neuralgic pains are the nervous symptoms against which stramonium is most efficacious. This remedy is of incontestable utility in the treatment of the element *pain.*

The inhabitants of some islands employ the root of stramonium in violent cephalalgia. In 1819, M. Orfila recorded the case which he observed at Mahon, of a woman who was cured by this means of an in-

tense and intermittent headache, with which she had been tormented for two years. She took for five days a grain of the extract of stramonium morning and night, without inconvenience. On the sixth day, having taken two grains at a dose, she experienced the symptoms of narcotism to a frightful degree, but this condition being relieved by appropriate means, the headache did not return.

Facial neuralgia sometimes yields to this remedy administered internally, and Kirckhoff reports four cases in which tic doloureux was cured by frictions with tincture of stramonium made along the course of the affected nerve. MM. Trousseau and Pidoux have employed datura, not only in neuralgia of the face, but in that of the head and neck. They employ it in ointment, fomentation, or tincture, rather than internally; sometimes they administer it by the endermic method, or in the form of a plaster. The application should be continued even after the pain has disappeared. Deep-seated neuralgia, as that of the brachial plexus, or sciatic nerve, are more rebellious to the action of the remedy than neuralgia of the superficial nerves. In neuralgia of long-standing, in facial neuralgia especially, stramonium often fails.

Mania and Melancholia. The results of Störck's experiments on the curability of insanity by stramonium were fortunate, but they were too few to merit confidence.

Maret cured two out of five lunatics at the asylum of Dijon with stramonium; the others obtained no relief from it. Meza administered it with advantage to nine maniacs. In the United States apyretic mania is frequently treated by the tincture of stramonium, 20 or 30 drops daily.

Hallucinations. M. Moreau first employed stramonium in this form of sensorial delirium. This treatment was suggested to him by *a priori* reasoning. The datura possessing incontestably the property of producing hallucinations, M. Moreau thought that it might determine a *substitutive* action. Whatever may be the value of this theory, the observations published by M. Moreau in 1841, and the numerous facts subsequently collected by M. Billod, prove that stramonium exercises a peculiar influence upon hallucinations, and that it may, perhaps, be regarded as almost a specific against this symptom, provided the dose is raised until intoxication commences. The hallucinations persist until the patients take four to eight grains daily. At this dose, the nervous system is always overwhelmed, and as soon as the cerebral excitement is manifested, the datura triumphs, and the hallucinations disappear. Is this condition of incipient intoxication necessary to the therapeutical action of stramonium? There is reason to believe so. Nevertheless the question is not yet solved.

Nymphomania. According to Dr. Maly, datura overcomes the gravest spasmodic affections of the sexual organs. He pretends to have cured in a short time several cases of nymphomania, by giving five drops of the tincture of stramonium every two hours, in a proper vehicle.

Epilepsy. Greding, one of the first who repeated the experiments of Störck, succeeded only once in curing this affection. Odhelius, at

Stockholm, treated fourteen epileptics with the extract of stramonium, with various results; eight were cured, and five were relieved.

Rheumatism. Zollickoffer has used stramonium externally and internally with the greatest advantage in chronic rheumatism. In acute articular rheumatism, M. Selveton recommends the following method: He administers the fifth of a grain of the extract of the seeds every three hours until delirium occurs. The dose is then diminished, but the state of delirium is maintained for three or four days, the remedy is then abandoned. By this method he asserts that acute rheumatism may be cured in a few days. MM. Trousseau and Pidoux, who have tried it, affirm that they have obtained advantages from it which they had sought in vain from other means.

Hemorrhoids, tumours, ulcers, burns, etc. Stramonium is used externally in all of these affections, and also in engorgements of the breasts accompanied with acute pain. It gives prompt relief in these cases, but it must be employed circumspectly, for when applied when the epidermis has been removed it often causes grave accidents.

Mode of administration. Stramonium may be smoked in a pipe, mingled with an equal portion of sage leaves, or it may be made into cigars. Unless this means gives relief in a fortnight it may be abandoned. Those who use tobacco can mix it with stramonium. Fumigation may also be practiced by placing the stramonium leaves on a heated shovel.

The extract of stramonium is prepared from the seeds, the fresh juice of the leaves, or the dried leaves. The first two methods are preferable. The dose is the fifth of a grain gradually augmented to eight grains; the latter dose should never be exceeded. Thirty or fifty grains are required to destroy life.

The powdered leaves are deservedly little used. The infusion and decoction (gr. 20; water, ℥viij.,) are rarely employed.

The tincture is prepared by digesting two ounces of stramonium seeds in eight ounces of water, and four ounces of rectified alcohol. Ten or fifteen drops may be given in an appropriate vehicle. Hufeland recommends this tincture internally and in frictions.

The ointment (ext. stram., ℈ij.; lard, ℥ij.,) and the liniment (ext. stram., ℈ij.; ol. oliv., ℥iv.,) are frequently useful.—*Journal des Connaissances Médico-Chirurgicales.*

MEDICAL PATHOLOGY AND THERAPEUTICS.

8. *On Some of the Signs of Incipient Pulmonary Phthisis.* By M. Bourdon.

It is known with what difficulty the presence of pulmonary tubercles is diagnosticated when the disease is in its incipiency, and how in-

sufficient the stethoscopic signs are. The latter may be wanting when the lungs contain a large quantity of tubercles; they may exist when the lungs contain none; and they may be masked by different sounds. The general symptoms are not a sure means of detecting the disease; a simple catarrh may be attended with very grave symptoms, while a true phthisis may affect the general system very slightly. It is at the commencement of the disease that the diagnosis is most important, because this is the only time that there is a chance of treating it with any success. M. Bourdon has sought to elucidate this obscure point. Attracted for a long time by the frequency of certain symptoms in phthisical patients, he has studied them with care, in order to establish their value as signs. These symptoms are arranged under many heads, according to the organs in which they show themselves: 1. gastric symptoms; 2. hepatic symptoms; 3. thoracic pain. The gastric symptoms are not to be confounded with the morbid phenomena observed in almost all diseases. Those which coincide with the incipiency of phthisis are nauseas, vomitings, epigastric pains, dyspepsia. You must not wait to find these symptoms in every case; nevertheless they are extremely frequent, since M. Bourdon found them in more than two thirds of his subjects. Some phthisical patients suffer from one of these symptoms; others, on the contrary, have them all combined. Nausea and vomiting are most common; and it is generally after the cough that they exhibit themselves. It must be observed, however, that their frequency or intensity are not at all proportioned to the cough; they occur when the stomach is empty as well as after a repast. Generally the vomitings consist of mucous matter, rarely of bile. Still, while they show themselves with a large number of the tuberculous, they do so in a positive manner with very few. Another very common symptom is the epigastric pain. In the largest number of cases, it is accompanied with nausea and vomiting; nevertheless it occurs alone sometimes. With the largest number of patients it is only manifested upon pressure, or is so slight as not to be noticed by the patient until their attention is attracted to it; in a smaller number of patients it manifests itself spontaneously. Although it shows itself both before and after eating, it is yet most commonly observed after the ingestion of food. Long continued dyspepsia, without nausea or vomiting, is frequently observed. Frequently the gastric symptoms precede the thoracic; but often also they show themselves at the same time or subsequently. Do they imply a lesion of the stomach, is a question which has occupied the author. Sometimes he found the stomach healthy; most frequently it presented some lesion, which was oftenest a papillated state of the mucous membrane. The author thinks the pressure of the tumefied bronchial glands upon the pneumogastric might contribute to the disorders of the stomach.

2. The liver sometimes presents remarkable peculiarities. In half the patients examined by M. Bourdon there was an increase of volume, frequently attended with pain. The increase of volume seemed to be particularly observable in the right lobe; the consistence of the organ seeming to undergo no change. The changes of sensibility are less

frequent than the changes of volume. Spontaneous pains are rare; they only manifest themselves under pressure, or under some sudden and straining movement. In some rare cases this change of sensibility is observed without change of volume. As to the change the liver undergoes, the autopsies prove that in more than half of the cases it is due to fatty degeneration more or less advanced. The bile is generally of greater density and more highly coloured.

3. The largest number of phthisical patients suffer from pain between the shoulders and in the sides of the chest; but, besides these spontaneous pains, there are others to which M. Bourdon calls the attention of physicians, and which are only recognised through the medium of percussion. The points where these pains are discovered are numerous, but they are most often seated below the clavicles, and only on the side affected with tubercles. If both sides are affected the pain is on the side most affected. As to the cause of this pain, M. Bourdon, like M. Beau, is inclined to ascribe it to intercostal neuralgia.

The conclusions drawn by M. Bourdon from his researches are as follows: When prolonged dyspepsia, nauseas and vomitings are observed, without any assignable cause; when the liver is abnormally developed, without there being hepatitis or disease of the heart; when these phenomena are exhibited independent of any other affection, or in the course of chlorosis, or after measles or typhoid fever; the physician should turn his attention to tuberculosis, examine the patient with great care, and even when there is doubt of the reality of the pulmonary affection, he ought to act as if convinced, or at least he should take his precautions.—(*Archives Générales.*)

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9. *On the Medication of the Larynx and Trachea.* By S. S. Alison, M. D.

The application of remedies to the larynx and trachea has lately attracted much attention. There can be no doubt of the utility of local treatment; and if some of the followers of Dr. Horace Green have pushed their opinions to extremities, others, like Dr. Alison, have brought to bear on the subject a correct and discriminating judgment, which sees the advantage without extravagantly over-rating it.

The undoubted efficacy of the local application of nitrate of silver, justifies an inquiry into the effect of other agents similarly employed, and we are glad to see that Dr. Alison has commenced it.

Dr. Alison has used the nitrate of silver after the manner of Green, in suspected ulceration, and in cases of chronic hoarseness and œdema. He found, however, that the weakest solutions were too stimulating in acute cases, and determined to try some other agent. *Olive Oil* suggested itself to him, and in several instances of acute laryngeal affections he has introduced the sponge soaked in oil into the larynx, and has found the sense of dryness and weight much relieved, and in some cases the voice at once greatly improved. *Glycerine* has been substituted for olive oil, and answers the same purposes; *cod liver oil* leaves

a disagreeable taste behind it, and is not better than olive oil. Mucilage and glycerine have been used as the vehicles for the local application of morphia, conia and atropine. The morphia is used in doses of one-eighth of a grain, and has been found to allay irritation and coughing. Atropine (gr. 1-30th) appeared useful in a case of hysterical cough, and its employment is suggested in epilepsy.—(*Medico-Chirurgical Review.*)

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10. *On the Ergot of Rye in Retention of Urine.* By M. PASSOT, of Lyons.

Ergot of rye possesses not only the property of exciting uterine contractions in cases of inertia of the uterus, but is also very efficacious in the retentions of urine caused by atony and paralysis of the bladder. MM. Baudin and Payan (d'Aix), were the first who endeavoured to demonstrate that this agent did not act precisely upon the uterus, but rather upon the inferior portion of the spinal cord. They praise it highly in the affection we have under consideration. Drs. Kinsley, Canuto-Canuti, Sainmont, and Allier, have also recorded cases which bear favourable testimony to the utility of ergot in paralysis of the bladder.

I am in possession of several cases which prove, in an incontestable manner, that ergot is capable of restoring the contractility of the bladder. The following is the most remarkable:—In July, 1846, I was consulted by M. H. 60 years of age, of a dry constitution, and well-marked nervous temperament. M. H. owns that he has indulged in venereal and gastronomic excesses, and attributes the vesical paralysis from which he has suffered for fifteen months, to these causes. There is no symptom of organic alteration, no fever, little or no enlargement of the prostate. The canal of the urethra is pervious, and the urine drawn off by the catheter is perfectly clear.

After finding cantharides and blisters useless, I used the following prescription: ℞. Of powdered ergot, gr. xl.; of mucilage, ℥iv.; a table-spoonful every half hour. ℞. Of powdered ergot, gr. xxx.; cocoa butter, a sufficient quantity. To be made into two suppositories; one to be introduced at night, the other in the morning. A few hours afterward, M. H. experienced tenesmus of the bladder. I ordered a bath. The patient was scarcely in it, before micturition occurred spontaneously.

From this time until his death, M. H. has always passed his urine freely and without the assistance of an instrument.

It is certain that ergot cures retention of urine depending on simple atony or paralysis of the bladder. But with regard to paralysis consecutive to apoplexy, or depending on some other affection of the nervous centres, it is well known that they are unaffected by the remedy we are considering.—*Revue Med. Chir. de Malgaigne.* April, p. 234.

SURGICAL PATHOLOGY AND OPERATIONS.

11. *Analysis of the Cases of Injuries of the Head examined after Death in St. George's Hospital, from January,* 1841, *to January,* 1851: *with Pathological and Surgical Observations.* By PRESCOTT HEWETT, Esq.

SECTION I. *Scalp Wounds without Fracture of the Bones.*—In this decennium 33 cases of scalp wounds without fracture of the bones were examined. In 10 of these cases death was produced by some other cause. In the remaining 23 cases mischief of a serious nature soon followed the injury, and ultimately proved fatal. Diffuse cellular inflammation occurred in 17 cases, and in 12 this was accompanied with erysipelas. In four cases there was diffuse inflammation of the neck, which spread down to the mediastina in two, and caused œdema of the larynx in two cases. Hæmorrhage in two cases followed sloughing caused by inflammation. In nine out of 12 cases, where both brain and its membranes were healthy, death ensued from purulent infection. In ten cases inflammation had existed about the membranes or the brain. In eight suppuration was found between the bone and the dura mater. The trephine had been applied in three cases. Most of the patients were persons of intemperate habits. Several had insisted upon leaving the hospital, but were readmitted with swelling of the scalp and other signs of inflammation. Simple puncture, as recommended by Sir Benjamin Brodie, relieves the œdematous swelling not uncommonly following scalp wounds; but free incisions are required when suppuration ceases. Sloughing of the scalp is thus usually prevented. Separation of the dura mater from the bone may occur either as a primary or as a secondary effect. In the first case the small vessels connecting the dura mater to the bone are ruptured by the blow; in the second the osseous tissue inflames and suppurates. Generally speaking, the suppuration between the bone and dura mater is circumscribed, and the extent of the mischief on the inner side of the bone is exactly traced by that on the outer side; but should the suppuration occur in the parietal region it may be much more diffuse. In this decennium there has been no single instance of the secondary puffy tumour of the scalp described by Pott. It has never fallen to the author's lot to witness a case in which the application of the trephine for the evacuation of pus within the cranium, as described by Pott, had a successful issue. He has never known the trephine applied at St. George's Hospital with the view of evacuating matter situated either under the dura mater or in the brain. Matter may flow, upon the application of the trephine, from the cancellous diploe of the cranium. Purulent infection was observed in 14 out of 23 fatal cases of scalp wound. This disease is found especially in injuries involving the osseous system, and M. Chassaignac believes that the removal by the

trephine of the contused bone, before suppuration has taken place in its diploe, destroys the source from whence the secondary mischief is for the most part derived; but such an explanation cannot be received as a valid one.

SECTION II. *Fracture of the Bones and Separation of the Sutures.*—In this decennium 78 cases of fracture of the skull were admitted, 18 of which had received other severe injuries, of a nature likely to cause death; 56 were simple fractures; 22 were compound. Of the simple fractures, 19 were accompanied by wounds of the scalp not exposing the bone; extensive separation of the sutures coexisted in 14 cases. In 47 cases the injuries had been produced by the patients having fallen from various heights; in 10 the blow had been inflicted by some heavy instrument. In the 56 cases of simple fracture, there was only one single instance in which the injury was confined to the spot upon which the blow had been struck. Fractures of the base of the skull seldom exist alone; in a large majority of cases the injury coexists with fractures radiating from the point where the blow was struck. In 68 cases of fracture of the base, six only were confined to this region, and it was only in two cases that no trace of fracture could be detected at the seat of the blow. In six cases of simple fracture the injury was accompanied by depression, which was in all very slight. In 10 cases of compound fracture there was also depression of the fragments, considerable in 9. Fractures of the skull, with depression of the inner table alone, occur but rarely. The author divides the skull into three zones, to each of which injuries are often confined, fractures of the middle zone being the most common. Fractures involving the orbital plates of the frontal bone are oftentimes accompanied with effusion of blood in the orbit. Bleeding from the ear is of not infrequent occurrence in severe injuries to the head, indicating fracture through the petrous portion of the temporal bone. But of the signs indicative of fracture of the petrous bone, one of the surest is the copious discharge of a watery fluid, which may or may not be preceded by bleeding. The author believes the fluid to come from the sub-arachnoid space. That such is sometimes the case has been established by M. Robert, in a valuable paper in the "Mémoires de la Societé de Chirurgie de Paris," vol. i. The discharge occurred in old as well as in young subjects. M. Chassaignac has endeavoured to prove that this fluid owes its origin to the filtering of the colourless part of the blood, and other surgeons have held that it comes from the cavity of the arachnoid. Such cases, however, if they do occur, must be rare. The author does not believe that the source of the watery fluid in all cases is the sub-arachnoid space, but in most cases, and especially those where it is clear and abundant from the commencement, and he refers to Mr. Hilton's Lectures in proof of this statement. Extensive separation of the sutures coexisted with the fractures in 14 cases; separation of the coronal suture occurred in seven cases, and of the lambdoidal in three cases; of the sagittal suture in four cases. In one case, and in one only, there was separation of a suture without a fracture; it occurred in the posterior part of the squamo-parietal suture.—*Dublin Medical Press*, June 22.

12. *Resection of the Wrist.* By M. MAISONNEUVE.

At the Cochin Hospital, bed No. 9 was lately occupied by a man of thirty-five years, who had suffered for two years from a suppurating white-swelling of the carpus and carpo-radial articulation. The resources of medicine had been vainly employed to arrest the progress of the disease; and abundant suppuration was exhausting the strength of the patient.

Amputation seemed inevitable. Emboldened by the great success which had attended his resections for several years, M. Maisonneuve believed that it was right to attempt to preserve the hand by resecting the wrist.

This operation was performed on the 17th of May, in the following manner:

A longitudinal incision four inches long, upon the dorsal surface of the fore-arm and hand, exposed the carpus and the carpo-radial articulation. The extensor tendons were drawn aside, and were kept asunder together with the integument. The articulation was then opened with a bistoury, and, in consequence of the complete relaxation of the muscles, it was easy to expose the extremities of the radius and ulnar, which were resected with an ordinary saw.

M. Maisonneuve then extirpated, successively, the eight bones of the carpus by means of small cutting forceps.

No important organ was sacrificed in these manœuvres. All the nerves, tendons and arteries were respected. The wound was united by adhesive straps and a simple dressing.

Three weeks have scarcely elapsed since this brilliant operation, and already its important results may be seen.

The wound has almost entirely cicatrized; the hand preserves its sensibility and all its movements, and everything indicates that the patient will find it as useful as ever.

We are unacquainted with any similar operation done in France. This will be a new addition which the surgery of our country will owe to the indefatigable activity of the skilful surgeon of Cochin.—*Gazette des Hôpitaux.* No. 69.

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13. *On Excision of the Calcaneum.* By H. M. GREENHOW, Esq.

If the history of conservative surgery be examined it will be found to have gained ground immensely during the last few years. A hundred years ago resection of the joints was not thought of; and though the Moreaus introduced the operation of removal of the bones of the ankle as a substitute for amputation, and practiced it in two cases with success, yet their example remained unfollowed for many years, and a sort of prejudice appeared to exist against the operation—a prejudice now fast vanishing away, based, as it is proved to have been, on very insufficient grounds.

The Moreaus were great advocates for resection of the joints, but it

never appeared to them feasible to excise or to extirpate singly any of the larger bones of the tarsus. Thus Moreau says, "Caries of the os calcis does not present the same facilities with respect to excision as is the case with the other tarsal bones. If you take off the inferior surface of calcaneum the heel can no longer bear the weight of the body. If the surgeon were obliged to destroy the attachment of the tendo-Achillis, I think it would be better to remove the limb." He then goes on to say that he has gouged out the greater part of a diseased os calcis, leaving however the insertion of the tendo-Achillis untouched, and that the case did well.

The idea of removing the whole of the os calcis probably never occurred to Mr. Syme, and Liston and Fergusson do not encourage the excision of the ankle bones. The former never excised any of them, and though the latter has performed partial operations on the os calcis with success, he has never removed the entire bone; and he says of excisions, that "such operations are under any circumstances extremely difficult, and, in most instances, more dangerous to the patient than amputation at the ankle or in the leg."

But it now appears that these opinions have, to a great extent, been based on *a priori* reasoning; and though at first there appeared to be many reasons against the success of excision, it is now evident that these have been overrated, and that difficulties have been conjured up which have really no existence. In December, 1847, Mr. Thomas H. Wakley performed his operation of excision of the os calcis and astragalus, and with success. The operation has been repeated many times and with good results generally.

I have collected twelve cases which do not, perhaps, include every instance of excision of the os calcis; yet they are all I have been able to collect, and are sufficient to form a basis of enquiry into the merits of the operation.

All the patients, excepting one, were males. This is no peculiarity; for diseases of the bones are more common, for obvious reasons, in males than in females. All the patients were under 30 years, and the majority under 20 years of age; so that caries of the os calcis is a disease, as far as these observations show, of youth. All of the patients without exception were of the scrofulous diathesis; and, it may be added, had lived for the most part in ill-drained situations and on scanty and unnutritious food.

As regards the duration of the disease, it varied from eight weeks to ten years. The latter instance shows how long it may be kept at bay, yet also proves its incurability without operative interference.

The morbid anatomy of those diseases of the calcaneum which call for its removal, appears to be a simple matter, for, on looking at the list of cases, it will be seen that caries is the almost universal disease. The disease usually originates in the bone itself, and the operation should therefore be done early, before the articulating surfaces become involved.

And now to compare the advantages and disadvantages of this operation with those of amputation.

The great advantage of amputation is, that the diseased limb is quickly and effectually removed. Among its disadvantages, besides the loss of the foot, we notice that its effects upon the system are more severe than those of excision. In excision the loss of blood is less, and the shock to the nervous system slighter. Nor is there such danger of destructive inflammation as was apprehended, for the parts around the ankle, when excision is demanded, have long been exposed to the air, and are not so very liable to inflammation.

It has also been supposed that the limb would never be fit for anything after the removal of the calcaneum; that the incisions would not heal; that the joint would be stiff; and that the tendo-Achillis, being detached, would not fix itself to the neighbouring parts. To this it may be answered, that experience shows that the incisions do heal, in some cases even by the first intention; that the joint is generally very moveable; that the tendo-Achillis is found to attach itself very firmly to the soft parts, and to adapt itself to the new state of things in the ankle; that the patient is freed from pain; and that at last he has a useful limb preserved to him—a limb which is almost as serviceable as its fellow. The fact that the posterior tibial artery was wounded in several instances, and that the circumstance did not retard the cure, proves that the fear of it need be no obstacle to the performance of the operation.

While claiming for this operation a considerable share of merit, it is far from my intention to deny that more partial excisions and gougings of the calcaneum may be of great service, but I believe that the cases adduced are in favour of the belief, that there are cases in which partial excisions are inadmissible, and in which amputation may be successfully avoided, by the adoption of this operation of excision of the whole os calcis.

The deformity is not very great after the operation; in nearly every case the patient was able to walk with a very slight halt; while the shape of the foot was not materially disfigured.

In regard to the manner of operating, every surgeon chooses his own method. Some preserve the sole entire, others do not hesitate to take flaps from it. The direction of the incisions must be determined by the position of sinuses and ulcers, but a cicatrix on the sole of the foot must be avoided if possible.—(*Med. Chir. Rev.* July.)

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14. *Aneurism of the Left Subclavian Artery cured by Cauterization with the Chloride of Zinc.* By M. BONNET, of Lyons.

[At the meeting of the Institute of France on the 20th of June, M. Lallemand read the following extract of a letter from M. Bonnet.]

Gauthier, a field labourer, aged 25 years, received on the 5th of December, 1852, in the left sub-clavicular region, a wound from a knife, which divided the whole of the brachial plexus, and which, having wounded either the sub-clavian artery or one of its principal branches, was followed by an abundant hæmorrhage, and subsequently by an enormous aneurism.

The rapid enlargement of this tumour, and the hæmorrhages which occurred from time to time, menaced the life of the patient, and rendered prompt interference indispensable. The ligature of the left subclavian within the scaleni, the only method that was possible, seemed to me, and to the colleagues I consulted, too dangerous and too difficult. M. Pétrequin believed that galvano-puncture was inapplicable, because the pulsations and souffle in the sac could not be suspended even for a moment. The plan of M. Pravaz, of injecting the perchloride of iron, was not then known, (January 2nd,) and perhaps the enormous volume of the aneurism, its proximity to the heart, and the impossibility of compressing the artery which supplied it with blood, would have counter-indicated its employment. Compression was out of the question, for it could only be employed upon the tumour itself, and it was unanimously decided that it would be worse than useless.

In this critical conjuncture, prompted by motives which I shall presently set forth, I thought that by using the caustic paste of the chloride of zinc, I might obtain a cure, or at least suppress the hæmorrhages which might at any moment cause the death of the patient.

An eschar having been formed by the caustic in the centre of the tumour, I removed with the bistoury, every two or three days, superficial layers of the cauterized parts, and during five weeks I made a series of applications of the paste of chloride of zinc, the wound widening and becoming deeper every day. On the fourteenth day the pulsations and the aneurismal souffle had completely ceased, and towards the end of the second month the eschar could be detached without the supervention of hæmorrhage. It was found that the sub-clavian artery was completely destroyed, the primitive carotid alone could be still felt pulsating near the vast cavity. The patient left the hospital perfectly well, after a treatment of two months and a half duration.

Many modern authors attribute the idea of treating aneurisms by cauterization to Ambrose Paré, Guattani, or Séverin. The references have been made without consulting the original works of these authors, which I have carefully examined without discovering the slightest allusion to the method ascribed to them. The ancients could not, at all events, have employed the chloride of zinc, for it was unknown to them, having been introduced into practice by M. Canquoin.

The idea of employing this agent was suggested to me by the fact, which I have observed every day for the last ten years, of its power in coagulating the blood and preventing and controlling hæmorrhage.

In 1837, I abandoned the cauterization of varicose veins of the leg by potassa, which involves the danger of hæmorrhage, and by the Vienna paste, which does not penetrate deeply enough, and I used instead chloride of zinc, by means of which I have been able to remove the whole thickness of varicose vessels without the slightest fear of hæmorrhage. In the hundreds of cases in which I have applied this method, I have found in the centre of the eschar a firm clot, a real plug, formed by a coagulum of blood.

Having extended this practice to the treatment of hæmorrhoids, of varicoceles, of erectile tumours, I, in all cases, discovered the power

with which the chloride of zinc, permeating the vessels by imbibition, coagulated the blood in them, and produced eschars, including the whole calibre of the vessels, which contained very firm clots.

The destruction of goitre of the thyroid gland, and that of the omentum, which I operated five times, and which M. Desgranges has also frequently repeated, demonstrated to me that chloride of zinc prevented arterial as surely as it did venous hæmorrhage.

Nevertheless it was proper to hesitate before employing this method in aneurisms, because, in the first place arteries are in juxtaposition with important nerves which must not be sacrificed; and, secondly, the separation of the eschar may be succeeded by hæmorrhage.

The first objection arrested me, and should arrest all surgeons in ordinary cases, that is to say, in those in which the nerves are intact. In the case which I am reporting, it was no obstacle; for the brachial plexus was so completely severed, that powerful galvanic currents were incapable of producing the slightest contraction of the muscles of the arm.

It also appeared to me that it was possible to obviate the danger of hæmorrhage from the fall of the eschar, because it was possible to retard its separation. Experience, in fact, demonstrates that the parts in which mortification has been produced by means of the paste of M. Canquoin, separate regularly eight or nine days after the removal of the caustic. It therefore would suffice, in order that an eschar should remain a month or more, that the applications of chloride of zinc should be renewed at intervals until the twenty-first day. By an analogous process, the eschar might be maintained in its place for six weeks. Experience, as will be seen, justified all of these anticipations.

I am far from wishing to assign greater import than it really possesses to the successful case I have had. However remarkable may be the cure of an enormous aneurism located so near the heart, and of such a grave nature that the usual methods were unavailable, still the plan of cauterization can only be adopted exceptionally; it can only be applied to cases in which the tumour is in relation to no important nerve, or in which the nerves, deprived of power, have no claim to be respected.

In these exceptional cases, cauterization deserves consideration. It alone, before M. Pravaz's remarkable discovery, could possibly have saved the patient, and perhaps the injection of the perchloride of iron would have been useless in an enormous aneurism, in which the current of blood could not be suspended for an instant.

Another circumstance has recently occurred to M. Gensoul and myself, to shew that cauterization by the chloride of zinc may render services that have been sought in vain from other methods.

The case was one of an aneurism by anastomosis, occupying the summit of the head, and measuring three inches in diameter. The tumour beat with a loud bellows sound, and was supplied by seven large arteries, which could be felt upon the forehead, temples, and occiput, and which appeared to be about the size of the brachial artery. Injection was impossible, and compression had been tried in vain for more than

a year, and it was thought that no resource was left but the ligature of the two primitive carotids.

Cauterization with the paste of the chloride of zinc solved this difficulty perfectly; we have succeeded in removing, without a trace of hæmorrhage, the trunks of each of the large arteries and the greater part of the tumour.

I shall report this case when it is complete. It suffices to say, that the present condition of the case does not permit M. Gensoul or myself to doubt that a cure will be speedily achieved.—*Compte-rendu de l'Académie des Sciences*, June 20th, and *Gazette des Hôpitaux*, June 23d, 1853.

OBSTETRICS, &c.

15. *Neuralgia of the Uterus—Intra-uterine Cauterization.* By M Jobert (de Lamballe).

The nerves of the uterus are distributed chiefly to the body of that organ, to the almost complete exclusion of the neck, as M. Jobert has long since demonstrated. There is nothing astonishing therefore in the exquisite sensibility of the former, or the comparative insensibility of the latter, or in the fact that affections of the body of the womb occasion much more acute suffering than is caused by diseases of the uterine neck.

It is not in inflammatory lesions alone, such as metritis of the body conjoined with phlegmasiæ of the neck, that the special sensibility of the uterus is observed. It behooves the practitioner to know that the nerves distributed to this organ may be the seat of true neuralgia, as well as those of other portions of the body.

There, as everywhere else, neuralgia is characterized by lancinating pains following the course of the affected nerves. These pains extend from the body of the uterus towards the loins; they are exasperated by pressure upon the uterus, whether effected through the abdominal walls, or immediately, by means of the finger introduced into the vagina.

The pain does not constitute the whole disease, any more than in other regions; it is conjoined with certain functional disorders of the organ to which the diseased nerve is distributed, (functional disorders which consist, in tri-facial neuralgia, for example, in hypersecretion of the buccal, nasal, or oculo-palpebral mucous membrane,) in the same manner uterine neuralgia occasions analogous disorders, such as leucorrhœa, an augmentation in the duration and quantity of the menstrual discharge, or even true metrorrhagia, as happened in a patient whom we lately observed in the service of M. Jobert.

Case. Marie Œstermann, dress-maker, aged 33, entered February 11th, 1853, at Hôtel-Dieu, Salle St. Maurice, No. 17.

Her menses appeared at eighteen, and from her twenty-second to her twenty-seventh year she had three children. The labours had been natural; they had terminated without any accidents; and this woman had never been sick until two years ago, when an extremely abundant leucorrhœa made its appearance. A short time afterwards she experienced acute pain in the hypogastrium, with lancinations which shot towards the loins or down the thighs.

It was concluded from the responses of the patient that this discharge and suffering could not be attributed to vaginitis, for she neither felt any smarting nor suffered during micturition. Menstruation continued regularly, although the pains were greater throughout its duration, and the leucorrhœa more abundant at the commencement and close of each period.

Four months antecedent to her admission, true metrorrhagies had occurred, appearing indifferently at the time of the catamenia or during the intervals. The blood issued from the vulva either in the liquid state or in coagula, and its expulsion was accompanied by uterine colic and contractions. At the same time a notable exasperation of the pains took place, their lancinating character being preserved.

The patient, either in different hospitals or at her own home, had been cauterized twenty-two times in all; five times with the actual cautery, and upon other occasions with nitrate of silver or with the acid nitrate of mercury. She had experienced no perceptible relief. When she entered Hôtel-Dieu her pain was the same, and she had an abundant hæmorrhage. The Touch indicated that the uterus presented neither granulations, nor irregularities, nor ulcerations. No examination was made with the speculum at this time on account of the hæmorrhage, which was combatted by appropriate remedies.

On March 21st, after finding that the orifice of the neck, half open, and with blood and mucous dropping from it, exhibited no organic alteration, M. Jobert introduced into the very interior of the uterus an iron cautery heated to whiteness. He employed a strong stylet, to which he had given a curve corresponding to that of the uterine sound, and he inserted it about an inch and a half beyond the external orifice of the cervix.

The next day the white discharge was more abundant than usual; there was no blood, and the patient only complained of a slight sense of weight and weakness in the pelvis. This cauterization was repeated in the same manner on the 28th of March, and subsequently upon two occasions, from the 28th of March to the 12th of May.

The catamenia of April occurred at their customary period, but they lasted longer than they should, they were accompanied by pain, and some coagula were thrown off. It was quite different in May; at which time nothing abnormal occurred. There was no hæmorrhage in the interval, and the pain had so completely disappeared that a few days since, at the time the patient was discharged, the uterus could be touched and ballottement practiced without causing the slightest suffering.

The treatment which was employed and which operated a cure in this case, was the natural consequence of the anatomical facts which we have recalled. But the therapeutical application of these facts demanded a perfect acquaintance with the nature of the disease. Before entering Hôtel-Dieu this patient had been treated for an affection of the cervix which probably did not exist, she had experienced no amelioration, notwithstanding five applications of the actual cautery

to the uterine neck. But M. Jobert's four cauterizations differed completely from the preceding, inasmuch as the cautery instead of stopping at the os tincæ, was carried into the cavity itself of the uterus, and it was precisely on that account that it was efficacious.

Transcurrent cauterization, which constitutes the most heroic treatment employed against neuralgia, only produces its effect when practiced at the nearest possible point to the affected nerve. If the painful nerve is in the walls of the uterus there is no hope of acting upon it by cauterizing the neck, because too great a thickness of tissue intervenes. M. Jobert comprehended this perfectly, and therefore instead of useless cauterizations to the healthy cervix, as others had practiced before him, he preferred to attack the disease in the centre of the organ, confident in so doing of causing no injury, and of procuring a rapid cure.—*Gazette des Hôpitaux.* June 4th, 1853.

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16. *Placenta Prævia.* By M. DEPAUL.

At a recent meeting of the Medico-Chirurgical Society of Paris, M. Depaul presented a paper upon uterine hæmorrhage due to the attachment of the placenta upon the inferior segment of the uterus. After showing that in such cases the cause of the hæmorrhage was a defect in the comparative development of this part of the uterus and the placenta, the author asks what the accoucheur must do to remedy such a condition of things? That will depend upon the frequency of the hæmorrhages, their amount, the state of the fœtus, the life of which may be compromised, and lastly, upon the existence or absence of uterine contractions. There are many indications which the practitioner will have to consider before adopting any course. He may employ only general means, such as blood-letting, the use of ergot, the tampon; and, as a last resource, he may perforate the membranes, in order to obtain prompt delivery either by version, or by applying the forceps, according to the presentation of the child. But when the placenta is implanted over the very opening of the neck, I believe it best, says M. Depaul, to apply the tampon, to let the labour advance, and to try to loosen the placenta laterally, in order to be able to rupture the membranes. I am decidedly opposed, adds he, to tearing the placenta from side to side in order to reach the child; such a practice is attended with too many dangers. After delivery in such cases, it must not be forgotten that the danger is not over; the hæmorrhage may continue and prove fatal, kept up as it is by the peculiar vascularity of the inferior segment of the organ, and by the slow tendency it has to contract during the first days after parturition. This contraction ought to be induced by every means in use, the best of which is unquestionably ergot.

L'Union Médicale. No. 60.

17. *On Procreation.* By Dr. Hirsch.

Hirsch* has arrived at some practical conclusions in contradiction to the prevailing theories of procreation. He concludes that menstruation in the human female has no analogy with the heat of beasts; that fructification can be accomplished at any time, not at the period of menstruation only, as in the lower animals at heat.

This he proves from analogy with the male, who is capable of fruitful coition at any time; from the fact of females feeling the instinct of copulation equally at one time as at another; from that of the Jewish females, who are obliged by their customs to abstain from coitus for five days before and seven days after the first appearance of menstruation, being, nevertheless, very fruitful; and from a case which came before him, where a woman was found to be impregnated twenty-two days after healthy menstruation. He states, also, that the ovary produces continually mature ova, which are either fructified during coition, and then being discharged, roll down in the uterus; or if unfructified, are dissolved and washed away at the monthly period. This he supports by observing, that menstruation may be replaced by vicarious hæmorrhage, and that women who are incapable of conception still go on menstruating. The human ovum is fructified in the ovarium, not in the oviduct.

The stay of the ovum in the oviduct must be very short, and contributes nothing to the further development of the ovum. In many animals the ovum may be fructified in the tubes, or even in the uterus; but in the human female the decidua is already formed if the ovum has got to the uterus.

The follicle (Graafian) leaves a far larger scar after impregnation than after menstruation.

Menstruation in the human female has a double object—to purge the body of blood, which is superfluous when impregnation does not take place, and to clear away the mature ova when no fructification has taken place.—(*Med. Chir. Rev.*)

LEGAL MEDICINE AND TOXICOLOGY.

18. *Suspected Peritonitis caused by Abortion.* By M. Masson.

[The following communication was made at a recent meeting of the *Société de Médecine Pratique*, of Paris.]

The fact which I am about to relate appears to me worthy of being submitted to your reflections, as much from its medical value as from its furnishing another proof of the importance of scientific knowledge

* Schmidt's Jahrbuch, 1853, No. 2.

in many judicial investigations. One is terrified, in fact, in thinking of the great number of crimes which must have remained unpunished because the appropriate means of proving them were wanting, and afflicted in reflecting that many innocent persons have been the victims of appearances founded upon presumptuous or upon mysterious and inexplicable circumstances. But thanks to the researches of those high-minded and indefatigable men, the most illustrious of whom has just been taken from us, crime may be now exhumed and brought to light, even when concealed in the bodies of victims, and buried in the bowels of the earth. These new methods of investigation were the more necessary, because in these days when brutal violence is severely punished by law, crime naturally seeks concealment by astuteness and ingenuity. The author of this narrative, and the physicians who assisted him, are far from thinking that they acted with more intelligence than any other medical men would have done; only without their assistance the magistrates would have been in doubt and embarrassment, and would not have known whether to acquit or condemn.

At the head of the Pont-Neuf, between the rue Dauphine and the rue Guénégaud, there is a small narrow street, (rue de Nevers,) dark and dirty, at the end of which stands a house less gloomy than the rest, in which a family of Jews resides. Hither came towards the end of December 1852 a young and beautiful girl of eighteen, who had left Hâvre to reside in Paris among these Israelites. Two months elapsed, and no one knew anything of the motives which had induced her to leave her family, or of the nature of her occupations. In the month of March last, a girl named Julie came to ask her to ride in the Champs-Elysées; but a few hours had scarcely passed when she was driven home in a dying condition. They hastened to call a physician. The latter found her complaining of acute pain in the abdomen, which was tympanitic; from time to time nausea and syncopes occurred, announcing a grave internal lesion. The young girl related how a cavalier had approached the carriage and had been thrown from his horse, and said that the emotion which this accident caused her had rendered her insensible. The physician diagnosticated a peritonitis; to subdue it he practiced venesection, applied leeches, employed mercurial frictions, and administered antispasmodics; but in spite of these remedies the patient expired eighteen hours after the invasion of the disease.

The medical officer whose duty it was to register the decease, was astonished at so sudden a death, and could not believe it natural. At his instance the Mayor forbad an interment, notwithstanding the representations of the commissary of police, who had listened to the explanations of the physician in attendance, who considered the disease an acute peritonitis.

Being summoned by the magistrate, I repaired to the theatre of this event. My visit caused great commotion; my questions were only answered in an evasive manner, and in an almost unintelligible idiom. It is needless to say that our suspicions were aroused, and that in consequence the representative of the public authority requested me to examine the body and to determine whether there had not been an abortion or an effort to procure abortion.

As soon as I seperated the labia majora, I observed the uterus considerably lower than natural, and a lacerated condition of the edges of its orifice.

Not being sufficiently satisfied by this condition of things to give an opinion, I requested permission to open the body. In consequence of the re-

port addressed to the Prefect of Police, M. Tardieu and myself were detailed to proceed to the autopsy, which was made the next day.

Four and twenty hours had sufficed to induce great decomposition. Upon the incision of the abdominal walls an enormous quantity of fœtid gas escaped. The uterus being removed and opened, we found no trace of a recent conception; but the cavity of the organ was greater than in virgins, and the dilatation of the orifice, and the fissured irregularities of the neck, indicated perhaps an antecedent accouchment. The cause of death was evidently elsewhere: a quart of blood, half fluid, half coagulated, filled the excavation, pressed upon the uterus, and aided by the excessive meteorism, had pushed it forward. What was the cause of this hæmorrhage? What would have been its results had it not caused death so promptly? Would there have been a hope that this collection of blood would have found issue to the surface, or could the woman's life have been preserved by freely evacuating it by an incision? I submit these questions to your meditations.

There was no trace of peritonitis; no serosity, no commencing plastic exudation. The parts were pale, discoloured, exsanguined. We were convinced that the woman had succumbed to internal hæmorrhage.

Could the physician who conducted the treatment have recognized the cause? Would not we ourselves, would not any one, have been deceived by the acute pain in the abdomen, the nausea, hiccough and spasm? The small pulse which accompanies peritonitis would not have enlightened us; we would have probably bled and leeched, and the patient would have succumbed from a double cause, in losing blood *intus et extrà*.

I believed this fact worthy of being communicated to you, inasmuch as everything seemed to combine to lead to the suspicion of a crime. The promptness of the death; the obscurity of the cause which produced it; the unlikely story of the cavalier dismounted at the moment this girl entered the Champs-Élysées with a Julie who cannot be discovered; the descent of the dilated uterus; the lacerated os tincæ, all seemed mysterious, even to the street, the house, the religion of those who lived there, their incoherent responses in a foreign idiom. It is useless to state that no prosecution took place, after the facts revealed by the necropsy. I have thought that the medical aspect of the case would be none the less interesting.

M. LAFONT enquired if it was not possible to discover the source of the hæmorrhage; for, added he, these collections of blood, according to M. Nélaton, may exist for months without causing death.

M. MASSON. This could not be determined; but the hæmorrhage may have caused peritonitis, and the blood have given rise to the infectious gases which distended the abdomen. The quantity of the extravasated liquid was estimated at about three pints. The patient also lost blood by venesection, leeches, etc.; hence followed prostration, syncope, and lastly death.

M. TERRIER. I regret to hear peritonitis thrown out of the question, because no traces of it remained several days after death, when the patient had exhibited all the symptoms of acute peritonitis during the eighteen hours which preceded her death.

Broussais has taught us, and they too much affect to disregard his lessons in our day, that an acute phlegmasia may leave no trace thirty hours after death, if it lasted for a short time only.

Undoubtedly the person who was the subject of this report did not die of the phlegmasia, but of the internal hæmorrhage, the signs of which were partly masked during life by those of the peritonitis. Nevertheless, as no sufficient reason was found at the autopsy to deny the diagnosis of the attending physician, I regret the denial of a disease which was probably one of the causes of the hæmorrhage to which the patient succumbed.

M. FOUCART remarked that there were inflammations, as erysipelas, for example, which left no traces after death.

M. MASSON added, on his part, that before the complete establishment of a phlegmasia, there occurred what might be termed the nervous stage of an inflammation.

M. BOYER. The observation communicated by our colleague is highly interesting. The depression of the uterus in the pelvis reminds me of a case which I once treated. Being summoned to practice paracentesis upon a woman with ascites, I found the uterus so forced downward as to project from the vulva; it was impossible to reduce it until the effusion was evacuated. The woman died after a second tapping, but the fact on which I wished to insist was the expulsion of the uterus produced by the enormous distention of the abdomen.—*Gazette des Hôpitaux.* No. 60.

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19. *On the Detection of Antimony in the Human Organs.* By M. CHEVALLIER.

The experiments of MM. Milon and Laveran upon the sojourn of antimony in the organs, have lately been discussed at the academy. Here is an observation obtained in the service of M. Marchal (de Calvi), at Val-de-Grace, which relates to the subject. A very feeble patient, having been treated for a double pneumonia by large doses of tartar emetic, and having succumbed on the 15th day of the disease, eight days after the cessation of this treatment of Rasori, portions of the liver, kidney, and brain, and a certain quantity of the blood of this patient were separately introduced into large flasks. A quantity of pure, fuming hydrochloric acid, nearly equalling the organic matter in weight, was then added to each flask. The mixture was gently heated on a sand-bath, ebullition being avoided, and after a few hours small quantities of chlorate of potash were added.

The liquid was then filtered, and the matters remaining upon the filter were washed with distilled water.

A sheet of tin was plunged into the different liquids, and was immediately covered with a black, pulverulent deposit of antimony. After a few hours the sheet of tin was removed, and placed in pure hydrochloric acid; the next day it was dissolved, and the black deposit had fallen to the bottom of the vase. It was easy to see:

1. That the liver had furnished a considerable quantity;
2. That the kidneys had furnished less;
3. That it was present also in the blood, but in still smaller proportion;
4. That the brain itself contained it, but in far less quantity than the other organs, and the blood.—*Journal de Chimie Médicale.* June 1853.

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20. *Effervescing Waters rendered Toxic by Lead Syphons.* By M. CHATIN.

It would seem as though a vast conspiracy had been planned to poison communities by saturnine compounds. Cider recently caused the gravest accidents among the lower orders, and now effervescing waters are propagating lead-poisoning among the wealthier classes.

M. Robert, surgeon to Beaujon, bought, towards the end of last summer, a number of bottles of Seltzer water, each bottle being provided with a metallic tube reaching to its bottom. Owing to some circumstance, they were kept for ten or fifteen days before they were used. Struck, when about to drink them, by the peculiar styptic taste of the liquid, M. Robert fancied that it contained lead perhaps. An unopened bottle was confided to me for examination, and was found to contain enough lead, dissolved through the agency of the carbonic acid, to furnish an immediate black colour with sulphuretted hydrogen, and, after a little while, a precipitate of sulphuret of lead weighing seven grains! This enormous quantity of poison shows what accidents M. Robert escaped in consequence of his sagacious foresight, and the extent of the danger to which ignorant or covetous mechanics expose the public.

The cause of the contamination of these waters with lead, is undoubtedly the nature of the tube immersed in the liquid, which, from economy, no doubt, is made of lead instead of tin or silver, or what would be still better, of glass.

A few days after the discovery of this fact, I found bottles with metallic syphons and plombiferous water, at several shops in the Faubourg St. Germain, and had them seized by the police. The attention of the prefect of police was called to the dangerous character of a beverage which is so fashionable during the warm season, and its sale was completely suppressed.

I fear however that bottles with syphons of lead will be sold again this summer, and I regard it as my duty to awaken the attention of the public to this matter.

I have no doubt that the frequent attacks of colic, which were last year attributed to cider, or the causes of which could not be ascertained, were often caused by effervescing waters impregnated with lead, like that which M. Robert furnished to me. Therefore I say to physicians, in order that they may repeat it to the public, beware of effervescing waters conducted through tubes of lead, and suppose, for

greater security, that this metal forms all the metallic tubes with which bottles of effervescing waters are provided, whether it is affirmed that they are of tin or silver or not.—*Moniteur des Hôpitaux.*

[Accidents identical with those observed by M. Chatin have occurred more than once during the present summer in New York, to individuals who have used "soda-water" which had been connected with the lead tube of the fountain during the night. The tubes of soda fountains should always be made of tin, or if they be made of lead, the soda-water should not be sold after it has been connected with the tube a few hours.—ED.]

21. *Hydrate of Magnesia as an Antidote.* By Dr. SCHUCHARDT.

From the results of the experiments of Schuchardt, it would seem that the hydrate of magnesia is not only an antidote for arsenious acid in solution or substance, which has been long known; but also for corrosive sublimate, the salts of copper, and even, though the experiments are not decisive upon this point, for certain alkaloids, such as morphia, brucia, &c. The hydrate of magnesia is prepared extemporaneously by mixing water with calcined magnesia. In poisoning by arsenical preparations, the quantity of magnesia used as an antidote should be twenty times as great as the poison ingested. If the toxic effects of corrosive sublimate are to be neutralized, a quantity of the antidote five times as large as that of the poison will be sufficient.—*Revue Médicale.*

STATISTICS.

22. *Statistics of the Medical Profession in England and Prussia.*

There are about 13,000 members of the medical profession in the British Islands:

At London, - - -	2,478
In the Shires, - - -	7,670
In Ireland and Scotland, - -	2,852
	13,000

The practitioners of London are divided into five categories:

1. Persons who were practicing before 1815, without diplomas,	52
2. Persons holding the diploma of Apothecaries Hall, or of the Royal College of Surgeons, - - - - -	1,698
3. Licentiates of the College of Physicians, - - -	53
4. Bachelors of Medicine, - - - - -	56
5. Doctors of Medicine, - - - - -	619
	2,478

The simple graduates are therefore 674 in number. The bachelors have received their diplomas at Oxford, Cambridge, Dublin or London. Of the doctors of medicine, 510 graduated in England, and 109 abroad.

The following are statistics of the profession in Prussia:

District physicians, - - -	287
General practitioners, - - -	3,266
Surgeons of the first class, - -	962
Surgeons of the second class, -	973
	5,488

The population of Prussia, according to the last census was 16,216,-912. The ratio of the medical men to the population is therefore about 1 in 2863.—*Journal des Connaissances Méd. Chir.*

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23. *Reports of Interments in Richmond, from July 15th to August 15th.* By A. MICHAELS, Esq., Superintendent.

Ages.	Whites.	Colored.
Adults,	20	17
Under 20 years,	31	28
Stillborn,	2	4
	53	49
Stillborn,		6
Unknown cause of death,		40
Various causes mentioned,		56
Total,		102

Causes of Death.	Whites.	Colored.
Consumption,	4	4
Affection of Brain,	3	2
Whooping Cough,		4
Sudden,	2	
General Decline,	4	
Cholera Infantum,	18	11
Old Age,		3
Homicide,	1	
Total,	32	24

THERAPEUTICAL RECORD.

Calculi.—M. Denamiel (*Compte-rendu de l'Académie des Sciences,*) June 15th,) proposes a new method of crushing calculi in the bladder, which he terms lithothliby. It consists in seizing the concretion between an ordinary steel sound, and the index finger introduced into the rectum, and pressing the sound with sufficient force to fracture the calculus. The fragments are then treated in a similar manner. Lithothliby is, of course, only applicable to the treatment of large and friable concretions, and even in these cases appears to us greatly inferior to lithotrity. For the rest, the author admits that he has little experience in the treatment of calculous disorders.

Carbuncle.—Dr. Caifassi recommends that the best frankincense

(Boswellia thurifera) should be powdered and made into paste, and spread on linen, for an application to carbuncles.—*Gazette des Hôpitaux.*

Colica Pictonum.—Dr. Swett, of N. Y., calls attention to the treatment of lead colic by strychnia, which he proposed a year or two ago, and which has become the settled practice at the N. Y. Hospital. He thinks that this disease depends upon paralysis of the intestines, and that strychnia, by acting upon the nerves, relieves it.

Dr. Watson has been successful in treating lead colic with tobacco. He applies a cataplasm of tobacco over the abdomen, and sometimes introduces a cigar into the rectum. Relief is generally obtained in forty-eight hours.—*N. Y. Med. Times.*

Epilepsy.—In a recent work by M. Herpin, which received a prize from the Institute of France, the prognosis and treatment of epilepsy are ably discussed. The remedies which M. Herpin found most successful were the salts of zinc, the ammonio-sulphate of copper, valerian, and an umbelliferous plant, the Selinum palustre. The oxide of zinc was exclusively employed in forty-two cases. Thirty-one of these had suffered from less than 100 fits; 26 were cured, and 5 were incurable; 5 had had less than 500 fits; 2 were cured, and 3 were incurable; 6 had had over 500 fits, and were all incurable. The oxide of zinc was commenced in quantities of from six to eight grains daily, given in divided doses, one hour after each meal. It was augmented two grains daily until the dose reached forty-five grains. With regard to the time when the remedy may be supposed to have had a fair trial, the following rules are laid down by M. Herpin: In children under one year, seventy-five grains should be administered before the remedy is given up. In cases over two years, and in which the prognosis is only moderately favourable, (cases of more than 100 attacks,) as much as four ounces must have been given during the treatment before another remedy is employed.

Iritis.—M. Helbert, physician to the great hospital of Hamburg, praises the singular virtues of oil of turpentine in syphilitic iritis. Dr. Hœring also speaks in the warmest terms of the remedy, which succeeded in his hands in two cases in which mercurials pushed to salivation, and the iodide of potassium were equally inert.—*Rev. de Thérap.* July 15th.

Nickel.—Professor Simpson has been experimenting upon the therapeutic properties of nickel, and announces that the sulphate of nickel possesses tonic properties, and that it may be occasionally employed with advantage as a substitute for iron or manganeses. In doses of half a grain thrice daily this salt is found very efficacious. In larger quantities it occasions nausea and vomiting. Dr. Simpson reports a case of periodical cephalalgia which yielded to this agent after salts of iron and manganese had failed; and he also mentions the cure of a woman who had suffered from amenorrhœa for ten years, but who recovered promptly under the administration of sulphate of nickel.

Odontalgia.—M. Buchaert, after reviewing in a summary manner the varieties of treatment of caries of the teeth, concludes that the key of Garengeot is the most efficacious remedy against caries and the pain accompanying it. He believes, however, that it is improper to extract teeth as is usually done in these cases; a *luxation* of the tooth is all that is required. M. Buchaert has cured more than a hundred soldiers of the sixth regiment of the line of tooth-ache by simply luxating the offending tooth, and then allowing it to grow again in its place. The teeth thus replaced are exempt from morbid actions, and are only affected by physical and chemical causes. M. Buchaert supposes that the periosteum of the tooth (supposing it exists) contracts adhesions with the alveolar process and continues to live, the tooth itself being dead.—*Revue Médicale.* July 15th.

Phthisis.—Avicenna considered sugar the best palliative of phthisis. Persons still use sugar in catarrh to moisten the throat, no doubt, and facilitate expectoration. Dr. Cartwright, of New Orleans, undertakes to cure consumption by sugar administered under quite a different form. He requires his patients to spend many hours daily in a sugar manufactory. It appears that the saccharine vapours which pervade these establishments arrest phthisis almost instantaneously!

Puerperal Fever.—MM. Paul Dubois and Grisfolle have employed the tincture of aconite in this affection in three cases; two of the patients died after a much longer period than puerperal fever usually requires to arrive at its fatal termination; the autopsies revealed numerous abscesses, pus in the uterine sinuses, and the other lesions of puerperal fever. The third patient recovered after presenting all the symptoms of purulent infection, and left M. Dubois' ward perfectly well. M. Tessier has recommended aconite in large doses in purulent absorption. Clinical experience can alone decide whether the remedy is worthy of confidence.—*Revue de Thérap.*

Typhoid Fever.—When meteorism, heat of skin, pain in the abdomen on pressure, and attacks of colic are the predominant symptoms in this disease, M. Sandras advises the application of ice to the abdomen. If nocturnal delirium, stupor, and congestion of the head occur, a bladder of ice should also cover the head. M. Sandras has long successfully employed this practice at the Beaujon hospital. The ice is mixed with linseed meal, which absorbs the water, and is frequently renewed. The tympanitis yields first; then the pain and fever gradually diminish. In the hæmorrhages which occur during typhoid fever there is no better remedy than ice.—*Gazette des Hôpitaux.* No. 13.

EDITORIAL AND MISCELLANEOUS.

On the Sale of Poisons.

At a future day the reader of the history of this country during the middle of the nineteenth century, will be attracted by the descriptions of the alarming prevalence of both criminal and accidental poisoning which those annals will contain; and will learn with astonishment that at this period, death from poisoning was in a great measure due to the criminal negligence of the State. Such a reader would discover that in one commonwealth alone—Ohio—a stringent act regulating the sale of poisons existed, and that there its provisions were totally disregarded; he would learn that everywhere the most deleterious agents were allowed to be openly and freely sold to the public; that confectioners were allowed to use these same agents in colouring bon-bons and candy; that mechanics were permitted to employ lead and copper in the construction of cooking utensils, and pipes designed for the conveyance of liquids capable of chemically acting on those metals; that no precautions were enforced in manufactories in which the operatives were exposed to the poisonous effects of mercury, lead and phosphorus; that no restraints were imposed upon the venders of quack medicines —medicines which had been known to have caused the deaths of numberless victims; that the office of coroner was usually held by persons totally unqualified to appreciate toxicological evidence, and that inquests were conducted in such a manner as to screen the criminal from justice, and encourage the crime of poisoning.

If such a reader examine the materials from which the historian compiles his narrative, he will learn the character of those who dispensed drugs and poisons to the public, and will read with amazement that druggists entered upon their responsible duties without any examination or license whatever; occasionally his eye will alight upon some legal examination like the following, which we extract from a recent New York paper:

A woman, it appears, had been poisoned by an over dose of the oil of tansy (purchased, of course, to procure an abortion; but we pass that over). The testimony of the clerk who sold the medicine was, in part, as follows:

"I do not know what the properties of the oil of tansy are; have not studied chemistry, nor taken any instructions in materia medica; studied a Latin grammar for about six months, when I was twelve years of age; never pursued the classics further than the grammar; I told the deceased when I gave her the oil of tansy that it was a poison; did not write the word 'poison' on the label of the phial; Mr. Farrington never gave me any instructions as to the manner in which I was to sell the oil of tansy; I do not know the Latin term for tansy; I think half an ounce of the oil of tansy would kill a man in good health; I cannot say if two drachms would have the same effect; I did not ask the deceased for what purpose she purchased the oil; I cannot say that I ever write the word 'poison' on the labels of bottles containing essential oils when I sell those oils; I sometimes advise persons who are sick what medicines they should take. Mr. F. is daily in the habit of giving such advice to persons who come to the store; I cannot tell whether essential oils acquire strength by age; I do not know whether the oil I sold to deceased was new or old oil."

In another page of the newspaper our student, passing over the leprous announcements of the "secret disorder" Doctors, would find the account of a death from "Watts' Nervous Antidote," or "Geodfrey's Cordial," side by side with the unblushing advertisements of these same specifics, with half a dozen clergymen's recommendations, a certificate by Betty the housemaid, sworn to before a magistrate, and a testimonial by a physician; or perhaps the catastrophe would be headed "Poisoning by Lobelia," or have occurred at a hydropathic establishment.

We can fancy the reader lingering over the recital of suicidal and murderous acts which will appear incredible, and complacently pronouncing upon the folly and ignorance of an age in which the actors in such atrocious crimes could obtain immunity and success.

The legislator of our free and enlightened land when told of these things, replies that it is none of his business; he says to the ghosts of the victims, on the "principle" of the worthy thane of Cawdor:

> "Thou can'st not say that I did it; never shake
> Thy gory locks at me."

What will these reformers ask next, he continues; have we not passed a law prohibiting the introduction of foreign adulterated drugs, and allowing our native apothecaries to put the entire profit resulting from these fraudulent admixtures in their own pockets? Are we to be ceaselessly legislating on the subject? If people will poison themselves are we to be made answerable for it?

But, my dear sir, it *is* your business. You are bound to protect the lives and health of your constituents as well as their purses. You are not to allow railroad companies to dash their brains out, or to let them

perish from the accumulation of filth and noisome exhalations in their streets, or to permit ignorant druggists to sell them poison, or criminals and unprincipled quacks to administer it to them. And since, in spite of all the barriers which wise legislation can interpose, these crimes will still occasionally occur, you are to appoint men of probity and sagacity, educated coroners, in fact, who can detect their perpetrators and deliver them over for punishment.

We know that it would be hard for our legislator to hear himself denounced by demagogues as infringing on personal liberty, because he might wish to require apothecaries to undergo an examination and take out a licence, or as squandering the public money, because he deemed it wise to appoint inspectors to determine whether the drugs the apothecary sold, as well as those he bought, were pure and were dispensed with proper caution. It would be almost cruel to ask him to face the merchants, farmers, and mechanics, his constituents, and tell them that he has voted funds for the support of a board of health, and a system of registration, and a hospital for the sick, and a college for the proper education of a class of persons competent to attend upon the sick, who are to be distinguished from the mass of society, and placed on a different footing from the illiterate quack, and protected in the lawful exercise of their calling. The poor legislator must calculate difficulties and drawbacks as well as reforms and advances; he must often confess "*video bona proboque, deteriora sequor;*" he must submit, and truckle to prejudice, and compromise; he must march at the world's pace towards reform—very, very slowly.

But if these hindrances beset the legislator, it is not so with medical men. It is their duty constantly to proclaim and seek what is just and necessary for the physical welfare of society; to be vigilant in detecting and condemning whatever is opposed to this. Let them therefore urge, strongly and with unanimity, those measures of public hygiene and of medical police which the public security demands, and if these recommendations are slighted, as is not unlikely, they will at least have the satisfaction of having discharged their duty.

American Association for the Advancement of Science.

The proceedings of the scientific convention held at Cleveland on the 28th of July, furnish gratifying evidence of the increased interest felt in science, and of the conviction, among its cultivators, of the ne-

cessity of associated efforts. Men of science are evidently realizing, in a highly appropriate manner, the dignity and utility of enrolling themselves as members of this body, which already includes so many who have earned an honourable celebrity. Nearly two hundred new members were elected at the recent meeting.

A full review of the proceedings of the association would be out of place in a journal devoted to strictly medical subjects; we may simply notice that after electing B. Pierce, the Cambridge astronomical professor, to the office of president, and Dr. Baird, of the Smithsonian Institute, and Professor St. John, to the offices of perpetual and annual secretary, the association proceeded to divide itself into sections, and to appoint standing and special committees.

Section A embraces mathematics and physics; Section B is devoted to natural history, geology, chemistry, geography and ethnology. Two-thirds of the papers presented were on subjects connected with mathematics and natural philosophy. Dr. Waldo J. Burnett contributed a paper on blood-corpuscle-holding cells, and their relation to the spleen; and a second paper upon the formation and mode of development of the renal organs in vertebrata. Professor Horsford, of Cambridge, presented an essay on the fatal effects of chloroform.

The officers of these two sections are as follows:

Standing Committee of Section A.—Professor Lovering, Chairman; Professor W. M. Chauvenet, Secretary; Professors E. Loomis, H. L. Eustis, J. Winlock.

Standing Committee of Section B.—Professor S. St. John, Chairman; Professor H. L. Smith, Secretary; Drs. J. L. Riddle, W. J. Burnett, Jos. Leidy.

We regret to observe that a resolution was passed prohibiting the sale of the "Transactions" of the association. It appears that the annual assessment of one dollar each from six hundred members suffices to defray the expenses of publication, and it has accordingly been determined that the edition of the Transactions shall be limited to a number of copies sufficient to supply the individual members, and foreign learned societies.

The next meeting of the association will be held in Washington on the last Wednesday in May 1854. We hope that on that occasion its ranks will be recruited by a large delegation from Virginia.

DEATH OF DR. CLARKE.

The profession in Richmond deplores the loss of Dr. William J. Clarke, who expired on the 20th of August, in the twenty-ninth year of his age.

Dr. Clarke possessed excellent capacities, and very considerable attainments in medicine. He was the eldest son of the late Micajah Clarke, who enjoyed for many years a wide and well earned reputation as a practitioner of truly wonderful sagacity. In consequence of the

immense success of the father, the career of the son has been observed with more than ordinary interest, and his untimely end has elicited the warmest regrets.

Doubtless, had time been given him, had he reached the maturity of his powers, he would have gained enviable distinction, and have worthily succeeded to the great place in public estimation which his father occupied. Such at least were the hopes which his talent and mental cultivation permitted his friends to entertain, notwithstanding the excessive modesty and reserve which impeded his professional advancement. Therefore their grief is the more poignant, that in his early manhood, his work all unfinished, Death has come and cut him down.

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*The Hospitals and Physicians of Paris.**

La Charité.—At the request of Marie de Médicis, five brethren of the congregation of St. Jean-de-Dieu, came from Italy to Paris in 1602, and founded this hospital. They were all surgeons or apothecaries, and not only gave relief to the sick, but assisted them in their religious duties. Half of the beds were supported by private charity; by paying 12,000 francs an individual purchased the right to a bed in perpetuity; it was difficult to gain admission at that time; now the hospital is open to every one who is sick. This establishment is situated in the Rue Jacob; it has a handsome front, with a spacious Doric entrance and vestibule.

The medical staff of this hospital is second to none in Paris; the appointments, however, rank after those at Hôtel-Dieu. There are six physicians: MM. Andral, Rayer, Cruveilhier, Bouillaud, Briquet and Piorry; two surgeons: MM. Velpeau and Gerdy; an apothecary: M. Quevenne; nine internes in medicine and surgery; sixteen sisters of the order of St. Augustin; sixty-seven servants of both sexes.

M. Andral is too well known to require an extended notice from us. He is a member of the Institute and of the Academy; a commander of the Legion of Honour; professor of pathology and general therapeutics to the Faculty; consulting physician to the Emperor; in short he enjoys all the honours which can be bestowed upon a scientific man. M. Andral is now 56 years of age. We have rarely seen him at the hospital; he makes a weekly visit, usually on Sunday morning, his service being directed at other times by the chef de clinique. At the Medical School his audiences are small but very attentive. He sits and reads his lecture in a low voice, without gesture or animation in his delivery. He never appears at the Academy of Medicine, even on those grand occasions when Roux, Velpeau, Rayer, and other great dignitaries attend to participate in the debates. Andral is said to be dissatisfied with science; as he has grown older, and his researches have been more extended, and he has wished to pass more directly from

* See page 427, *ante*.

the effects to the causes of morbid phenomena, his faith in pathological anatomy has become shaken; he has been compelled to confess that the lesions appreciable by our present modes of investigation are far from constituting the whole disease, and that beyond them are morbid conditions, yet undetermined, which precede them, and which control functional disorders; so that an anatomical lesion may exist without functional disturbance, these primary conditions not being present, and functional disorders may appear without any lesion if the primary conditions exist. Having admitted the fallacy of the anatomical doctrines, M. Andral has become one of the most sceptical physicians of the age.*

M. Rayer is said to enjoy the largest practice in Paris. His patients are chiefly among the financial aristocracy, and although the choice of these persons, in a matter of science, is no proof of the merit of him who is the object of it, yet in M. Rayer's case, popularity is associated with great ability and the soundest judgment. Americans usually consider M. Rayer one of the best of the French practitioners. His works *On Diseases of the Kidney* and *On Diseases of the Skin* will bear comparison with the most remarkable productions of our epoch.

M. Rayer belongs to the Institute, and presided over that illustrious assembly during 1852. He is not a member of the section of medicine, but of the section of rural economy and the veterinary art; this appears strange, but occurred in this way. When Andral presented himself as a candidate, he found a redoubtable adversary in Rayer. His friends, to remove every difficulty, offered Rayer the vacant seat in the section of rural economy if he would abandon his pretensions to that of medicine. This proposition was accepted, and as there has been no vacancy since, M. Rayer has never been transferred. But by whatever door he entered, he is fully worthy of his place.

M. Cruveilhier may be found every morning at his post at La Charité. Indefatigable in all things, the great anatomist devotes the same assiduous attention to his patients as to his scientific researches; his industry should take him to Heaven. A little old man, full of gentleness and kindness and old-fashioned courtesy, dressed like an

* "It is curious to note the connection between sides in politics, and some of the schools of art in Europe.

"The Hippocratic physicians are almost all ultra-royalists; the out-and-out anatomo-pathologists are to a man republicans; while the middle men, the doctrinaires, those of the *juste-milieu* party, are generally favourable to the existing state of affairs. The first clings closely to every thing that is hallowed by age and venerable from association; they love to throw an air of spirituality around all the phenomena of living nature; and hence their favourite writers are such men as *Chateaubriand* and *Lamartine*. The anatomo-pathologists are the antipodes of these; they are all more or less decided materialists in their general philosophy, and regard with especial admiration the bold originality of the modern romancists, such as *Victor Hugo, Balzac*, &c. The eclectics, or the third party, are intermediate between the two; their philosophy is altogether of a calmer character than that of either; less enthusiastic and poetical than the former, they avoid the cold abstractions and strivings after exactitude of the latter, who vainly seek to reduce everything of living as well as of inanimate nature under the dominion of mathematical and arithmetical laws. Of this party, Andral is perhaps the head in medical, as Guizot is in political, science."

antiquated dandy, one can hardly believe in looking at him that he is in the presence of the author of that magnificent monument to science, the Iconographic Pathological Anatomy, the successor of Bichat and Bèclard, the illustrious anatomist, the world-renowned professor.

Of the twenty-six professors who compose the Faculty of Paris, Cruveilhier alone came from the provinces In 1825, when the ultramontane party was dominant in France, and Charles X. and M. Frayssinous, grand master of the University, permitted no one to hope for preferment who was not of his majesty's religion, Dr. Cruveilhier was practicing in his native town of Limoges, and enjoyed the public esteem. The concours had been abolished, and the election of professors depended on talent much less than upon reasons of quite a different nature. Let us avow it meekly, M. Cruveilhier was a papist, and to this fact he owed his appointment. But if the principle which dictated the choice was bad, the choice itself was good; for it fell upon a man who perceived that there was something which it was incumbent on him to cause to be forgotten, and who regarded the favour of which he was the object, as an obligation to fulfil an immense task, rather than as a recompense.

Scarcely was he installed in his chair when he resumed the study of anatomy as if he had never learned it. He buried himself, as it were, in the dissecting rooms; he reconstituted the old anatomical society, of which he is now the perpetual president; he surrounded himself with all the young men who showed a taste for dissections; and his course soon became one of the most popular in the school. His lectures were published in 1834.* They constitute his well known treatise on descriptive anatomy, which has been translated into several languages, and which is enriched with all of the discoveries which appeared during the quarter of a century preceding its publication; even now it is one of the best we possess, and if it does not display the loftiness of the views of Bichat, it at least possesses all of the minute precision of the anatomy of Boyer, without its dryness.

But however absorbed he might be in the study of normal anatomy, Cruveilhier did not deceive himself in regard to the difficulty of creating a name in that branch of teaching, and he soon turned his attention to pathological anatomy, to which subject he had devoted himself at the outset of his career. Profiting by his position at the Salpêtrière, of which he had become physician, (through the same wicked influence which opened the doors of the school to him, of course,) he availed of the immense materials which were there presented to him, to lay the foundations of that noble monument we have spoken of, that rich and magnificent work,† to which nothing of its class can be compared, and which designated its author for the chair of pathological anatomy created by the liberality of Dupuytren.

* *Traité d'anatomie descriptive*, par Jean Cruveilhier, Dieuxième édition. 4 vols. in 8. Paris. Labé. 1843.

† *Anatomie pathologique du corps humain.* 2 vols., grand in-folio, avec 233 planches.

[*To be Continued.*]

Cretinism.

"Until the year 1839, the condition of cretins was supposed to be irremediable. Whole villages of them lived and died in Switzerland, as now in many other parts of the old and new world, without the most sanguine physicians of the country ever dreaming that their condition was otherwise than hopeless. In that year, however, a young physician of Zurich, Dr. Guggenbühl, witnessed an incident which convinced him that even a cretin could be taught something. He saw a cretin muttering, without understanding it, a prayer beneath a crucifix. The prayer had been taught by the mother, and the words, though not the sense, had been remembered by the idiot. Convinced that with so much memory the mind could not be utterly extinct, Dr. Guggenbühl resolved to devote his life to the single purpose of restoring, as far as possible, the priceless gift of intelligence to these unfortunate beings. He first entered on a systematic study of cretinism, and convinced himself that mental without bodily improvement would be impossible. In 1842 he succeeded in buying the mountain of Abendberg, and with the aid of some benevolent individuals of Germany and England, has treated since that time a vast number of cretins.

The institution is both a school and an hospital. With a correct appreciation of the true principles of treatment, Dr. Guggenbühl brings to bear on the cretins every influence which can improve their general health and rouse their mental activity. As far as medicine is concerned, the general treatment is tonic, for it is found that the evacuating and lowering plan is hurtful, even in the hydrocephalic forms. The first great tonic is the pure and highly electrical mountain air; the second, a good but simple diet, into which milk largely enters; cod-liver oil, carbonate of iron, phosphate of lime, and the expressed juices of tussilago, leontodon, &c., are frequently employed. In epileptic cases, copper, oxide and valerianate of zinc, are also used. Iodine (except in the form of iodide of iron) appears to increase the weakness and atrophy; stimulants, such as valerian, arnica, and serpentaria, given with the intention of stimulating the nervous centres, are not beneficial, but phosphoric ether certainly lessens the torpor, and increases the power of learning. Wine causes congestion of the head, and is little used. Warm baths, douches, frictions with aromatic spirituous fluids, &c., are employed to stimulate and improve the functions of the skin, and electro-magnetism is used to stimulate the muscles in all cases with a tendency to paralysis. Dr. Guggenbühl, in his zeal for the cause, has tried mesmerism, but no cretin has as yet been thrown into sleep. Gymnastic exercises are of course an important item of education: the swinging pole, the dynamometer, the triangle of Clias, and the American "baby-jumper," are the apparatus chiefly used. Afterwards, garden and field-work for the more robust prepare the children for their future occupations.

The body thus provided for, the cultivation of the senses simultaneously proceeds. The eyes of the cretin of the valley, dull, observant, and misty as they are, are naturally attracted by the magnificent mountain scenery of Abendberg; he is taught to look on the moon, the clouds, and the many-coloured glaciers; pictures cover the walls of his house; he learns his letters in a dark room, where the alphabet burns in phosphorus. His taste is excited and cultivated by strongly-tasting substances, such as quassia, salt, sugar, and vinegar. The sense of smell is stimulated in the same way by various odours. But it is through the inlet of the ear that the most powerful influences are poured into the mind. for the hearing of a cretin is often acute when his other senses are blunted or dormant. The human voice, the tones of the organ, and music of various kinds, arise around many times a day, and as soon as it is possible, every cretin is taught to take his share in the harmony. In this way, the great feeders of the mind, the senses, are called into action, and the mind itself is soon ready for the seed, which floats with it in the most natural way. Occupied in his garden, the cretin learns to note the growth of the plants he manures and waters, to observe the effect of his labours, and amidst the maze, to dimly discover a plan. Then his curiosity and interest (for these powerful agents of cultivation are by this time roused) are excited by a few striking physical experiments, until at length he is able to fix his attention, and to regulate the direction of his mind. Then he is ready for the more formal instruction of the school; soon he is taught to read and write, and from amidst the confusion and chaos of a mind diseased, arise the harmonious proportions of an intelligent soul.

The success of this elaborate and careful training is wonderful; some cases, indeed, are rebel and intractable, but the majority improve greatly both in mind and body. In the report before us are many examples of the fact, which our space obliges us reluctantly to omit.

We need scarcely remark that this result has by no means a merely local interest. Cretinism is not confined to the lower valleys of Switzerland, or to those other mountain districts of the old and new world, which resemble it in physical conformation. All over Europe, more or less, the victims of this disease are found. Virchow, in his late official inquiry, found in the villages of Lower Franconia no less than 133 decided cases.* In other parts of Germany, in Sweden and Norway, in England, even in its very metropolis, isolated cases are met with.

The causes of this singular complaint are not very obvious. Dr. Guggenbühl ascribes it to a peculiar malaria which, in Switzerland, does not ascend more than 3000 feet above the level of the sea, and the operation of which is assisted by a wretched sanitary condition, by impure air, bad water, miserable dwellings, want of light and of good food, and by the perni-

* Verhandl. der Phys. Med. Ges. in Würzburg, Band iii. p. 247.

cious practice of continual intermarriage. Virchow also inclines to the opinion that some special malaria is its cause. Whether or not the absence of iodine from the air has anything to do with it, future inquiry must determine. The observations of Chatin on this point are at present much too imperfect to warrant any conclusions.

Among the many noble works of philanthropy which, rather than the triumphs of an extended empire, or the spoils of an universal trade, form the true glory of this country, can we find anything more noble than this cretin seminary on the green heights above Interlachen? To have detected the capacity for improvement concealed in the distorted body and malformed head, was an evidence of no little wisdom, but to have formed the plan by which that improvement might best be brought about, and to have abandoned the easier paths of life for an office apparently so repulsive as that of a teacher of cretins, are proofs of uncommon genius and benevolence.

It is impossible not to draw a moral from this brief history of the establishment at Abendberg, and to wish that all the teachers of youth would recognise the wisdom of the mode of tuition there pursued. In just proportion the material and the mental are cultivated together. The body is nourished with the mind, and neither blunts the mind nor is exhausted by it. In its essentials, the education of the cretins should be the education of all children, and if from so impoverished a soil Dr. Guggenbühl has drawn such fruits, what might not be expected if the bodies and minds of children amply blest with vigour and intelligence were developed with an equal care."—*Med. Chir. Rev.*

MEDICAL NEWS AND ITEMS.

Tribute to the Memory of Chapman and Horner.—The graduates of the University of Pennsylvania residing in Mobile, held a meeting on the 18th of July last, and after drafting a series of resolutions expressive of their sense of the loss which the medical profession had sustained in the death of Chapman and Horner, a resolution was adopted calling upon the alumni of the University of Pennsylvania throughout the world to contribute the sum of *one dollar* each, in order that a suitable monument should be erected in Philadelphia, in the yard of the University, in honour of these illustrious votaries of science.

We are glad that this step has been taken, and we trust that the graduates of the University will hasten to respond to the call of their Alabama brethren. The Virginian alumni have a double incentive to perpetuate the memories of these two great men.

Contributions should be sent to the Dean of the University—Professor Joseph Carson, 332 Walnut St., Philadelphia.

The Yellow Fever in New Orleans.—The yellow fever continues its fatal progress in New Orleans with unabated violence. The deaths average 200 a day. The physicians of the city are too much occupied to tell us anything of the means they have found most successful in combatting the disease. We trust that their heroic devotion is not entirely unavailing.

A physician and two sisters of charity have already fallen victims of the pestilence. The epidemic has extended to Natchez and to Mobile.

Death of Jussieu.—To the necrological record of this year, which already includes so many scientific celebrities, must be added a name which has been illustrious for two centuries. ADRIEN DE JUSSIEU, the fifth of that scientific dynasty, which commenced under the reign of Louis XIV., with Bernard de Jussieu, who laid down the principles of the *natural method* in botany, and Antoine Laurent de Jussieu, who established this system on an imperishable base; ADRIEN DE JUSSIEU, the celebrated botanist, the president of the Institute of France, died on the 20th of June. "I have heard," says M. Ampere, in an obituary notice, which we find in the *Journal des Debats*, "I have heard the botanists of England, of Germany, of Italy, express their profound admiration for the writings of Jussieu, who has found means to add to the glory of his illustrious name. When I met Asa Gray, the eminent American botanist, he was carrying home with him, in preference to any other, the portrait of this savant, whose loss will be as acutely felt at Boston, as at Paris. Such suffrages are a prouder homage than any eulogy of mine."

Dr. PRAVAZ, whose new method for the cure of aneurisms, we have recently presented to our readers, died on the 24th of June last, at Lyons, at the age of sixty-two, of an acute cerebral affection.

M. Pravaz was the type of a man of science. He was a laborious student; his publications are all serious and conscientiously elaborated; he devoted himself with singular ardour and fidelity to scientific researches and their practical applications; he passed his leisure hours in learned societies, and scientific journeys.

His researches merit a critical examination—we cannot even present a sketch of them here. We must limit ourselves to recalling the aid he contributed in bringing lithotrity to perfection, the method of coagulating blood in arteries by galvanism, which he originated, the instructive memoirs which he published on orthopædic surgery, and his researches on spontaneous luxations of the femur, most especially; researches by which he demonstrated the utility of methodical treatment in that incurable affection, as it is usually regarded, and proved the truth of his theories by successful cases of incontestable authenticity. Lastly, Dr. Pravaz had scarcely promulgated his new method for the cure of aneurisms, by injections of the perchloride of iron, when death carried him away.

Epidemics.—Small-pox is making its mournful havoc among the Western Indians, and is raging in the Sandwich Islands in a most terrific manner. Both cholera and yellow fever are fatally prevalent in Cuba. Cholera still prevails to an alarming extent in Moscow and Copenhagen.

We learn that Dr. Virginius Harrison has been appointed Surgeon of the Marine Hospital at City Point, a post made vacant not long since by the death of the lamented Dr. Horatio M. Rudder.

Richmond Medico-Chirurgical Society.—The meetings of this useful association continue to be well attended, and to elicit interesting discussions, and papers of a high order of merit. We may instance the excellent dissertation on "fatty degeneration" by Dr. Roddey, which contains an instructive digest of our knowledge on this somewhat obscure portion of pathology, and which is published at length in the "Stethoscope" for August; and the paper on "dysentery" by Dr. P. Trent, in which he strongly advocates the saline treatment in that disease, that method having proved remarkably successful in his hands. We have not space to refer to all of the subjects which have engaged the attention of the Society; we can barely refer to the defence of the orthodox treatment of pneumonia, by Dr. Gooch, against the views of those physicians who adopt an expectant or stimulating plan in dealing with that disease; to the interesting cases by which Drs. Bolton and Snead illustrated the efficacy of chloroform in convulsions; to the remarks of Dr. McCaw on the therapeutic virtues of yellow jessamine; and to Dr. Little's case of amputation of the thigh, for a complicated compound fracture of the leg. We hope soon to review the instructive proceedings of this Society more in detail.

The physicians of the Hospital of Colmar, have discovered in a Jew between 20 and 30 years of age, and in the enjoyment of good health, a transposition of the viscera, the heart being on the right side, and the great lobe of the liver on the left.

The corner-stone of a model house for the working classes has been laid in Golden-Square, London. The members of the Society constituted for the erection of these humane edifices, held a banquet on this occasion, at the conclusion of which a collection of 900 pounds sterling was taken up.

The *Journal du Loiret* mentions a fact which merits the attention of naturalists.

"Dr. Bretonneau (of Tours) has recently subjected sensitive plants to the action of chloroform, and these flowers, so susceptible, so delicate, have submitted during their slumber to reiterated manipulations, without manifesting the least sensibility. This experiment has been repeated upon a young sensitive plant, blooming in a green house at Orleans. At the approach of the sponge the corolla remained open, and yielded resignedly to the autopsy which was made of its ovary and other essential organs. Upon the same stalk another flower, not etherized, folded its petals, like an eye-lid, at the approach of the hand."

Doses of Calomel in Days of Yore.—In the seventh volume of Haller's Dissertations, the curious reader will find an important paper on the use of calomel in various diseases, by Michaelis Alberti, in which he gives a learned history of this potent medicine, from the Arabian physicians down to Paracelsus, and thence to his own time, 1745. In this dissertation it will be seen that Helvideius gave doses of calomel of five scruples to two patients. To a third he gave 72 grains,

which affected the mouth for a fortnight. Neuterus gave calomel, at first, in the dose of fifteen grains, second dose a scruple, third dose half a drachm, then a drachm, at which dose he continued till ptyalism was raised. The intervals between the doses are not mentioned. Medelius advises the dose of calomel not to be raised beyond a scruple. From this and many other sources of information, it will be seen that there is nothing new under the sun.

Case of Onanism in a Horse.—M. Blanc, a veterinary surgeon at Marseilles, relates the history of a horse, who procured frequent voluntary seminal ejaculations, by rubbing the penis in a violent state of erection, upon the inferior wall of the abdomen; this was accomplished by flexing the body, and performing movements identical with those of coition. In order to remedy this essential vice, which considerably enervated his horse, the owner consented to M. Blanc's proposition to perform castration.

The operation had the result which was anticipated. The animal recovered his strength, and did good service.

M. Blanc speaks, in his account of this rare fact, of a *relaxation* of the cord of the left side, caused by a violent struggle of the animal at the moment when the operator was separating the testicle, a relaxation which was followed by the development of a fungous excrescence. This relaxation was probably only the result of the laceration of the species of posterior mediastinum formed in the sheath by the juxtaposition of the serous layers between which the parts containing the cord, are enveloped. The animal recovered well notwithstanding this complication.—(*Recueil de med. veterinaire pratique.*)

BIBLIOGRAPHICAL RECORD.

I. *Traité des Maladies du Cuir Chevelu, suivi de Conseils Hygiéniques sur les Soins à donner à la Chevelure.* Par P. L. A. CAZENAVE. *Treatise upon the Diseases of the Scalp, followed by Advice in regard to the Proper Culture of the Hair.* By Dr. CAZENAVE, Physician to the Hospital of St. Louis, Assistant-professor to the Faculty of Medicine, etc., Paris. J. B. Baillière. 8vo., pp. 400, with eight coloured plates. (From the publisher.)

"Hair, the universal vanity, has of course been seized upon universally by quacks—it has proved to them indeed the true Golden Fleece. Science, as though such a subject were beneath its attention, has left the care of the most beautiful ornament of the body in the hands of the grossest charlatans."—*London Quarterly Review.*

Thanks to the labours of Alibert and Biett, of Willan and Bateman, skin diseases have now assumed, in the eyes of physicians, the position

which is due to them. Every one now appreciates the importance of cutaneous affections, and no one disdains the study of this branch of pathology, so long regarded as an almost useless appendage of medical instruction.

In this subject, as in many others open to the investigations of science, in this, more than in others perhaps, the *ars longa, vita brevis est* intervenes with its fatal truth. The farther we explore cutaneous affections the greater are the difficulties which arise, and the more extensive the subject appears; at the same time the bonds which unite these diseases—so long considered isolated, and forming a class to themselves—to general pathology are found to be more numerous, and we more fully appreciate the light which general pathology throws upon cutaneous affections, and the resources which the study of the latter affords in the comprehension of other diseases.

There is still much investigation required on this subject. How much confusion still exists in the classification, how much uncertainty in regard to the form of skin diseases, how much difficulty in respect to questions of seat and nature! How often the physician is embarrassed in regard to the contagiousness of these affections, or in deciding whether eruptions should be let alone, or whether he should hasten to cure them; and as to *how* he shall cure them, if that is his determination!

These reflections are especially applicable to diseases of the scalp. In no portion of the dermoid surface are eruptions more frequent and inveterate than here. In none is the physician more likely to be deceived by apparent analogies; and in none are errors of treatment more likely to produce disastrous results. The reproach which is quoted at the head of this article cannot be addressed to science for the future. In this work the whole subject of diseases of the hair and scalp is considered, and rules for their prevention, and for their proper management, are laid down.

In view of these considerations, it cannot but be a subject of congratulation that one so competent to the task as the great dermatologist of the hospital St. Louis, should have taken the subject in hand, and seriously endeavoured to divest it of some of its difficulties and obscurities.

After a historical introduction, M. Cazenave very judiciously devotes the First Part of his treatise to anatomical and physiological considerations of the hair and scalp. The Second Part is devoted to pathology. Its first chapter comprises non-contagious diseases of the scalp, and under the heads achores or porrigo larvalis, eczema, and impetigo, the various diseases confounded under the name of milk crust, are described and classified. Pityriasis and psoriasis are also considered in this section, and cases of each, illustrated by coloured plates, are inserted.

The second chapter comprises contagious eruptions—*herpes tonsurans*, and the different varieties of favus—and discolourations—*vitiligo*, and senile and accidental *canities*. This chapter also contains a most interesting section on *plica polonica*, which the author supposes to depend upon a hitherto undescribed disease of the scalp—*acne sebacea*. In its simplest form (*acne sebacea simplex*), this disease consists in a hyperse-

cretion of the sebacious follicles; the greasy matter which is produced becomes concrete, and forms yellowish-green scales adherent to the scalp, from which they are detached with difficulty, leaving the skin slightly red. The second form of this disease (*acne sebacea trichoma*), consists in a liquid fatty secretion, which does not harden or form scales, but which moistens the hair and causes it to become matted and agglutinated. The third variety is the Polish disease (*plica polonica*). After considerable general disorder, the hypersecretion of the sebacious follicles commences; a thick viscous liquid, with the odour of fœcal matter, invades the hair, which presently becomes entangled and agglutinated, presenting the most horrible and offensive mass of filth and uncleanness.

Section Fifth embraces the subject of alopecia. Baldness may be natural, the result of age and impaired nutrition; or it may be pathological; and, in the latter case, it may depend either upon local or general causes. Senile alopecia is attended with destruction of the bulb, and is, of course, incurable. When baldness is symptomatic of a constitutional disease, there is usually a vitiation or incompleteness in the secretion of the follicle devoted to the formation of the hair, or this secretion may be entirely checked for a certain time. The bulb, however, exists still, although the hair falls from insufficiency in its nutrition, or because secretion is suspended. It is difficult to explain the action of general causes upon the alteration of the hair; it appears to depend upon a reflex sympathy with the pathological disorders which have deeply modified the economy. This is what occurs after variola, after certain fevers, in the course of phthisis, and in many cases after parturition. The loss of hair which occurs after syphilis, also belongs to this class; it is rarely accompanied by eruptions, or ulcerations, or even by desquamation. Lastly, baldness may be the result of local diseases. Inflammatory affections of the scalp loosen the hair mechanically as it were, and the complete removal of it is effected by the secondary products of inflammation, such as crusts, scales, etc., characteristics common to most of the eruptions which cause baldness, excepting vitiligo. The baldness produced in this manner may be either temporary and curable, or, less frequently, it may be permanent and irreparable. Favus enjoys the unhapppy privilege of causing fatal and irremediable alopecia. Herpes tonsurans, psoriasis and lepra, impetigo and eczema cause permanent baldness only when they assume the chronic form, and cause alterations of structure in the integument.

The Third Part of M. Cazenave's treatise is occupied by hygienic considerations. The hygiene of the hair consists: generally, in the preservation and restoration of the health; and locally, in the observance of scrupulous cleanliness, in avoiding hot and heavy head dresses, in refraining from twisting and torturing the hair, in not abusing oils and pommades, and in foregoing an over-scrupulous devotion to the duties of the toilet. The author deprecates the practice of wetting the hair habitually, and thus rendering it dry and friable; he condemns the routine custom of cutting the hair of children, or of shaving the heads of young girls, and observes that the most luxuriant

and beautiful hair is that which has never been approached by the scissors.

When the hair is uniformly too moist, the author permits the use of some spirituous lotion, or of a solution of borax. When, on the other hand, the hair is habitually dry, a simple unctuous preparation, such as beef marrow combined with a perfume, is of advantage. The author gives a great number of formulæ* recommended from time immemorial for the preservation of the hair, remarking that they are always useless, and often hurtful.

When baldness commences under the influence of age, or in consequence of some other cause, its progress is often accelerated by the injudicious employment of irritating cosmetics, or by the practice of shaving the head.

M. Cazenave places little confidence in hair restoratives, and agrees with Lorry, that nothing is rarer than the renewal of hair upon a bald head. The multitude of cosmetics intended to solve a problem, the solution of which is impossible, are as uniformly useless as they are uniformly rich in promises. Since Cleopatra employed bear's grease, every known fatty substance has been vaunted as an application to the hair. M. Cazenave considers all of these infallible remedies inefficacious, never having seen a single instance of *recapillisation*. Nevertheless, if there are no local or general causes to which the incipient alopecia can be attributed, there are many topical applications which produce no local or general injurious effect, and which may possibly arrest in some degree the fall of the hair.† Without possessing any

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* For example, the *Pommade Philocome:*

℞. Extract of Peruvian Bark, ʒss.
Oil of Sweet Almonds, ʒij.
Beef Marrow, ʒvj.
Volatile oil of Bergamot, gtt. vj.
Balsam of Peru, gtt. xx.
M. s. a.

And the far-famed *Oil of Macassar:*

℞. Oil of seeds of the sun-flower, ℥iij.
Goose-fat, ℥j.
Styrax, ʒij.
Cocoa-butter, ʒiij.
Neroli (oil of orange flowers), ʒj.
Volatile oil of Thyme, ʒij.
Volatile oil of Rose, gtt. xx.
Balsam of Peru, gtt. xi.
Mix, digest, and filter.

† For example, the *Pommade Schneider:*

℞. Lemon juice, ʒj.
Extract of Bark, ʒij.
Tincture of Cantharides, ʒj.
Volatile oil of Cedron, ℈j.
Oil of Bergamot, gtt xx.
Beef Marrow, ℥ij.

To make an ointment. The head should first be washed with soap and water.

The following formulæ are recommended by the author:

absolute efficacy, these applications may retard the loss of the hair, and are quite innocuous.

When the hair encroaches upon the forehead, or transgresses its proper limits in any other direction, it is customary to shave off the misplaced hairs. M. Cazenave thinks it much better to use a depilatory agent, and among the multitude of preparations for this purpose, the simplest and best is the cosmetic called *rusma*, employed by the Turks. This consists of a mixture of equal parts of sulphuret of arsenic and of chalk, made into a paste with rose-water. It is allowed to remain a few minutes, and removes the hair without leaving any blotches or cicatrices.

The author discusses the subject of hair-dyes in detail. The preparations with carbonate of lead and chalk are much preferable to those in which nitrate of silver enters as an ingredient.

M. Cazenave does not disdain to treat of wigs. The hygienic rules which he lays down on this subject concludes his treatise. We hope that the brief sketch of its contents which we have given will induce medical men to read the work for themselves. It will be found to constitute a complete cyclopædia on all that appertains to the hair and its diseases, and to contain much information that is by no means beneath the consideration of physicians.

II. *Anatomy of the Nervous System of Rana Pipiens.* By JEFFRIES WYMAN, M. D. Vol. V., No. 4, of Smithsonian Contributions to Knowledge. Pp. 52, and 2 plates. 4to. March, 1853.

Our literature abounds with systematic works upon anatomy. Several excellent treatises have originated among us, and almost every professor in the country has his name appended to a reprint or translation of some foreign anatomical work. Few works on special anatomical subjects have been called for, however; Solly on the Brain, and Sir Astley Cooper's monographs have not passed to a second edition; and Morton's *Crania Americana*, and the researches of Leidy, comprise nearly all of the contributions to original monographic special anatomy which have appeared in this country.

Professor Wyman's memoir is somewhat of a novelty therefore, and

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℞. Sulphate of Quinia, gr. xl.
Balsam of Peru, gr. xx.
Oil of Bitter Almonds, ℥ij.
Prepared Beef Marrow, ʒj.
F. s. a.

℞. Tannin, ℥j.
Vanilla, gr. xx.
Oil of Sweet Almonds, ℥ij.
Prepared Beef Marrow, ʒij.

Or else M. Cazenave advises lotions morning and evening, either with the tincture of arnica or with the following mixture:

℞. Tincture of Sulphate of Quinia, ʒss.
Tincture of Canella, ℥j.

it will be referred to with pride on account of its originality, and its scientific and philosophical character.

The work is divided into seven sections, in which the various portions of the bactrachian nervous system are considered in detail, their homological and other relations pointed out, and the inferences to be drawn from their arrangement discussed in a learned and philosophical manner.

There is much which deserves special notice, but we must be content to refer to a few of the most striking passages.

After a description of the cerebral centres, and a discussion of the arguments of those anatomists who attempt to homologize the nervous system of articulates and vertebrates, our author treats of the structure and function of the cerebellum, and upon the latter much disputed point, he makes the following remarks:

"The low degree of the development of the cerebellum in frogs, naturally suggests to us an enquiry as to the nature of its functions, and likewise leads to the conclusion, that, whatever those functions are, they must, on analogical grounds, be supposed to have a low state of activity in comparison with the same organ in those animals in which it is proportionally more largely developed. The low development of this organ in frogs and cyclostome fishes, is certainly at variance with either of the more generally received theories entertained by physiologists of the present time; namely, those of Gall and Spurzheim on the one hand, and that of Flourens on the other. It would be difficult to reconcile either of them, or perhaps any existing theory, with numerous other facts afforded by comparative anatomy, all of which tend to show a vast disproportion, at least, between the size of the cerebellum and the activity of the functions of which it is alleged to be the seat. As regards the theory of sexual instinct, this function is certainly not less strongly marked in the lamprey than in ordinary fishes, as the trout or the herring; yet how widely different is the relative size of the organ in the two."

In regard to the second hypothesis, that of Flourens, Dr. Wyman observes:

"His theory, that the cerebellum coördinates muscular motions, is opposed by numerous anatomical facts, as well as by some of the results of pathology; for out of *ninety-three* cases of lesions of the cerebellum, Andral found but *one* to sustain the theory of Flourens."

We had supposed that the results of pathological observation had been quite different. Andral's researches as we understood them, were undertaken with a view of determining whether the cerebellum was an organ of psychical operations or not. It was noticed that inflammation of its membranes did not produce delirium, and that its complete destruction did not necessarily involve the loss of intellectual power,—

"But, remarks Andral, whilst the changes of intelligence were variable, inconstant, and of little importance, the *lesions of motion, on the contrary, were observed in all the cases* [of softening which had come under his notice] except one; and in this it was not quite certain that motion was not interfered with." (Andral, as quoted by Carpenter. Physiology, 3d ed. p. 353.)

We had also believed that comparative anatomy sustained the theory of Flourens, at least the table of M. Serres' contained in his most valuable Comparative Anatomy of the Brain, leads to this conclusion. According to this table, there is a remarkable correspondence between the size of the cerebellum and the variety and activity of movements possessed by the animal.

After treating of the form and functions of the encephalon, Dr. Wyman examines its minute anatomical structure. The student will find in this portion of the monograph a discussion of the mode of termination of the nervous fibres, of the relationship of the two varieties of nervous matter, and of other subjects of high physiological import.

Section III. is devoted to a consideration of the spinal cord, in which our author dwells particularly upon the changes of form which it undergoes during the progress of development.

Section IV. treats of the peripheral portion of the nervous system, and contains a most interesting comparison of the arrangement of the cranial nerves in frogs and mammels. Not a few of the details into which Dr. Wyman enters in this section, are new, and all are characterized by wonderful minuteness.

In Section V. the analogies of the cranium and its nerves are considered. Our author is in favour of the hypothesis which supposes the cranium to be constituted by three vertebræ, and endeavours to explain the jaws and bones of the face in connection with this view. These far-fetched analogies and efforts at generalization, like Hogarth's attempt to detect in all beautiful forms the governing principle of a crooked line, deserve but little praise.

Sections VI. and VII. treat respectively of the spinal nerves of the great sympathetic system.

In giving this imperfect review of the contents of Dr. Wyman's able memoir we trust that although our space has not allowed us to dwell upon the interesting views contained in it, we have at least succeeded in calling attention to a work, which, on account of its originality and highly scientific character, must take a high rank among modern researches.

III. *On Diseases of the Liver.* By GEORGE BUDD, M. D., F. R. S. Second American, from the last and improved London, edition. With coloured plates and wood cuts. 8vo., pp. 468. Philadelphia. 1853. Blanchard & Lea. (From the publishers.)

From the number of second editions of their works which have gradually accumulated on our table, we should judge that English medical authors have little reason to complain of want of patronage. In the case of the work before us, this popularity is well earned. Dr. Budd has succeeded in embodying in his treatise a large amount of valuable and instructive information, and his work may be said to represent very fairly the extent and kind of our present information concerning the diseases of the important organ of which it treats, and sets forth moreover sound and judicious views in regard to their treatment.

Dr. Budd belongs to the best school of practical English physicians; he is a labourer in the same vineyard with Watson, and Latham, and Todd; his manner of treating his subject is always characterized by honesty, and strong good sense, and an absence of over-refinement, of theorizing, and of pretension to an exactness unattainable in practical medicine. At least such are the impressions with which we have risen from the perusal of his present treatise, and of his clinical lectures in the Medical Times.

"In writing a book on diseases of the liver," says Dr. Budd, "I shall hardly be accused of having undertaken a needless task. There are no other diseases of such frequent occurrence which it is so difficult to discriminate, and for the treatment of which the practitioner has so few trustworthy guides. There is, again, no class of diseases at all equal to these in importance, on which so few treatises have lately been written." All this is very true, and we may add that since new modes of research, in the hands of Kiernan, Jones, Leidy and Bernard, have so largely added to our knowledge of the structure and functions of the organ under consideration, it is well that the subject should be reviewed in its practical bearings, and we are grateful to Dr. Budd for the successful manner in which he has achieved this task.

Our author analyses these discoveries, and commences by a full description of those anatomical and physiological principles, without the knowledge of which all speculations on the pathology of the liver, and all practice based on such speculations, must be purely empirical. This portion of the work will be particularly useful to those physicians who, having become engaged in practice before the promulgation of the researches to which we have alluded, have neglected to acquaint themselves with views now taught in every school of medicine.

The author then passes to his proper subject of enquiry, and after a chapter on congestion, he devotes over a hundred pages to the consideration of "inflammatory diseases of the liver." Dr. Budd's views on suppurative inflammation and abscess of the liver, which were first set forth in the Gulstonian lectures ten years ago, are original, and the arguments which he brings forward, deduced from the joint teachings of experiment, analogy and observation, are perfectly convincing. He makes hepatic abscess to depend upon a contamination of the portal blood, resulting from dysentery, and ulcerative affections of the intestines, gall-ducts, and other organs in which the portal veins originate.

The third chapter treats of diseases of the liver resulting from faulty nutrition, and comprehends the interesting subjects of fatty degeneration, scrofulous enlargement of the liver, derangements of the bile, gall-stones, etc.

Chapter fourth is devoted to the consideration of foreign growths and malignant diseases of the liver. In the fifth chapter the subject of jaundice is discussed. Diseases of a parasitic origin are described in an appendix. The work contains four coloured plates and a number of less brilliant but much more satisfactory wood cuts.

In conclusion, we can only repeat that the practitioner will find in this treatise ample information in regard to everything connected with

diseases of the liver, and express the hope that the brief recapitulation of its contents which we have given will induce many persons to study the work for themselves.

IV. *Displacements of the Non-Gravid Uterus; their Local and Constitutional Effects, and best Modes of Treatment.* The Dissertation to which the Fiske Fund Prize was awarded. By J. F. PEEBLES, M. D., of Petersburg, Virginia. Published by request of the Rhode Island Medical Society. (From the author.)

The well established reputation of Dr. Peebles as an observing physician and classical writer, derives additional weight from the publication of this essay. Succinct accounts of the affections which he describes cannot be otherwise than acceptable, as they are known to be complicated in their symptoms and difficult of treatment. The mechanical deviations of the uterus are admirably explained, and the local and constitutional derangements arising therefrom are fully considered with reference to the best means for their relief. In the mechanical treatment recommended, there is one point particularly acceptable to us, viz.: the use of Dr. Hodge's "Cylindrical Pessary," which is best adapted, as a mechanical support, to the structure and functions of the parts.

In noticing this production, we must regret that our Medical Societies have allowed it to be carried to be rewarded in another State, for we are sure the feelings of the author would lead him to prefer such a distinction at home.

V. *Dr. C. J. B. Williams and Others on the Principles of the Water Cure.* By J. TIMBERLAKE. 12mo., pp. 129. J. W. Randolph, Richmond, Va. (From the publisher.)

We should not condescend to notice this wretched little pamphlet, had not the author attempted to propagate his views under the auspices of the name of an illustrious physician, and conveyed the impression to the public that one of the most philosophical of modern medical writers is the advocate of empiricism and absurdity.

This erudite gentleman, who spells congestion with a *j*, who has kindly volunteered to enlighten the profession and the public in regard to the old Graafenberg story, has discovered to his astonishment that water has been used in medicine and surgery since the days of Hippocrates, and that many modern physicians have written about its uses. These he at once sets down as disciples of Preissnitz; and allows the reader to understand that he is only rehearsing to them the opinions of such men as Sir Charles Scudamore, and Dr. Forbes, who, the author with undeviating snobbishness informs us, is "*the Physician to Queen Victoria!*" The author has also found that all rational physicians are in the habit of employing water as a therapeutic agent, but regrets to observe that they refuse to admit its just claims, which in his opinion consist in its applicability to "nearly every disease to which the

physical frame of man is liable, and those of the most fearful and appalling kind."

The author appears especially attracted towards hydropathy because it originated with a Silesian boor, who, as he elegantly expresses it, "never knocked his head against a college." Doubtless the Bœotian ignorance which coined its title (*water-suffering*), endears the system still more to this admirer of uncultivated minds, who sagaciously observes, that "many of the most important discoveries in the useful arts, and which have benefitted the human family on the most extensive scale, have been made by individuals as obscure as Preissnitz, and such as had never knocked their heads against a college wall." The reasons of this kind defence of the uneducated will be quite obvious to those who read the author's book.

We have no intention of entering into a serious examination of this pamphlet, which does not even contain the oft-refuted arguments of hydropathy. The work is so weak and harmless that it will not make many converts, and we should not have thought it necessary to put the profession on their guard against it, had not Dr. Williams' name appeared upon the cover, and caused us to fear that the author's brass, covered by the physician's gold, might pass current. The author probably meant to convey no false impression by adopting the title-page he employs, and will doubtless alter it when convinced of its effect.

In conclusion, we would advise the author, when he next visits his poultry yard, (for we are sure that he is from the country; his style is redolent of green fields, *fœnum habet in cornu*,) to endeavour to witness that commentary on the water cure related by Hood:

"It has been our good fortune, says the kind-hearted humourist, to see a sick drake avail himself of the water cure at the dispensary in St. James' Park. First, in wading in, he took a Fuss-bad, then he took a Sitz-bad, and then, turning his curly tail up into the air, he took a Kopf-bad. Lastly, he rose almost upright upon his latter end, and made such a triumphant flapping of his wings, that he really expected he was going to shout, 'Preissnitz forever!' But no such thing. He only cried, 'Quack! quack! quack!'"

VI. *The Peninsular Journal of Medicine and the Collateral Sciences.* Edited by E. ANDREWS, M. A., M. D. Vol. I., No. 2. Pp. 48. Ann Harbor, Michigan. Published monthly at $2 per annum.

This is a well printed periodical, "intended to present a complete view of scientific news and literature" to the medical profession of Michigan. We take great pleasure in placing it upon our exchange list, and in offering the editor our cordial wishes for his success.

Among the original communications we notice the report of an amputation at the hip-joint by E. M. Clark, M. D., of Detroit. The patient was a negro, aged 49; the disease was pronounced "fungus hæmatodes." No reasons are vouchsafed for this decision, except that the limb was considerably enlarged in its middle and upper third, and

that, upon introducing an exploring needle, a bloody serum freely escaped. However, on the 28th of January, amputation at the joint was performed with a single flap from the outer side of the limb, and the patient survived the operation forty-one days.

We are pleased to observe that several pages of the journal are occupied by a republication of the National Code of Ethics, and read with great interest and satisfaction an advertisement upon the cover announcing the fourth session of the Michigan Medical College, which "will commence on the first day of October *and continue six months.*" We commend the conclusion of this announcement to the medical profession in older States:—"Expenses: Instruction gratuitous; Matriculation fee $10, payable but once, and applied to the benefit of the library and means of illustration. No graduation fee. A fee of $3 will be assessed for the benefit of the Anatomical Laboratory."

VII. *The Practice of Surgery.* By JAMES MILLER, F. R. S. E. Third American from the second Edinburgh edition. Edited, with additions, by F. W. SARGENT, M. D. Illustrated by 319 engravings on wood. 8vo., pp. 720. Philadelphia: August, 1853. Blanchard & Lea. (From the publishers.)

It is probable that most of the readers of this journal are familiar with previous editions of the work before us, and appreciate the substantial merits which have obtained for it such a favourable verdict at the hands of the profession. It is therefore unnecessary that we should enter into a detailed examination of its contents, or express any opinion respecting a treatise which by common consent is regarded as a standard.

We may only observe that the present volume is not a mere reprint; Professor Miller has added a large amount of new and valuable matter, and Dr. Sargent has done much to restore the reputation of "the American editor," which personage of late years has run the risk of being regarded as a nuisance. We read with interest an addition by the editor in regard to the lesions in concussion of the brain, derived chiefly from the researches of Nèlaton and Denonvilliers; and we are gratified to observe throughout the work that Dr. Sargent continually incorporates in his notes the opinions of French and American Surgeons; thus supplying omissions which the author, in common with his countrymen, is prone to make.

The work is profusely illustrated; many of the engravings are new, and all of them are executed in a highly creditable manner. Altogether the editor and publishers have succeeded in making the present edition a great improvement upon the previous ones, and the editor is entirely justified in asserting that this treatise, in connection with the volume on the *Principles*, constitutes one of the best expositions of the present state of Surgery in the English language.

VIII. *Materia Medica or Pharmacology and Therapeutics.* By WILLIAM TULLY, M. D. Vol. I., No. 7. Springfield. May, 1851. Published in monthly parts by Jefferson Church, M. D. (From the publisher.)

Not having seen the preceding numbers of this work, we are unable to form any very satisfactory estimate of its value. From an examination of the number before us we have been led to think very favourably of the author's talents and industry, but at the same time to apprehend that the Materia Medica, as he teaches it, will prove a very serious stumbling-block to students. We decidedly object to the extensive innovations in nomenclature which the author seeks to introduce, and do not care to be entangled in philological disquisitions while seeking to be enlightened respecting the properties of medicinal substances. Alterations of pharmaceutical terms are extremely inconvenient; we know of no useful end which is to be attained, for example, by calling calomel *chlorohydragyrous acid.* We fear moreover that the author's novelties in classification will lead to confusion of ideas, and will impair the usefulness of his treatise. Apart from these objections, we are glad to meet with a work exhibiting much thought and laborious investigation. Our author does not waste his time in delusive speculation, but examines into the properties and mode of action of drugs by the soundest methods of enquiry.

The work is original, and will undoubtedly form a valuable contribution to science. We shall look with interest for its continuation.

IX. *An Address delivered before the Am. Med. Association, at its Session of May,* 1853. By BEVERLY R. WELLFORD, M. D., President of the Association. (From the author.)

In this discourse, after a graceful introduction, Dr. Wellford enters into an historical review of the American Medical Association, and discusses its object and aims, and the results which it has achieved up to this point. Dr. Wellford believes that the Association has already effected a great deal by arousing attention to the imperfections of medical cultivation, and to the necessity of elevating the standard of medical acquirement, and by inducing the establishment of State and local societies, and thus, in some measure, reducing the professional mass to symmetry and order. The influence of the Association has been felt by legislative bodies as well as by the profession, and, in accordance with its recommendation, several States have adopted measures for procuring a registration of the marriages, births and deaths occurring in their several populations; and the Federal government has promptly responded to the wishes of the Association, by passing an act to prevent the importation of spurious and sophisticated drugs. Dr. Wellford gives a number of striking illustrations of the salutary effects of this law, derived from the report of the Inspector at the N. Y. Custom House. In this connection Dr. Wellford lament the frauds and adulterations of drugs which are still practiced at home, and recommends that State legislation should be invoked to put a stop to this evil.

We cannot refrain from extracting at length the author's remarks upon the separation of the teaching and licensing powers:

"Another topic of primary importance, to the advance of medical reform, is a proper regulation of the license to practise. The peculiar character of our system of government places this subject exclusively under the control of the State sovereignties, and to them we must appeal for the necessary legislation. In a very large proportion of the States, the diploma, which should be regarded merely as a collegiate honour, is virtually the license to practise. In truth, no license whatever is required, and hence, whoever chooses to assume the title of Doctor of Medicine, is permitted to practise, or rather, any individual, however ignorant, who offers his services to the public as a practitioner, has the title at once conferred, and is forthwith invested with all its privileges and immunities. The necessary and practical consequence is, that the intelligent and trustworthy, as well as the unqualified graduate, the Homœopathic, the Thompsonian, and all other medical heretics of whatever faith, are confounded under the same designation, and medicine, as a science, is held responsible for the effects of doctrines and practice which she repudiates and abhors. Common justice would accord to her the right to exclude from her honours, those at least, who wear her livery without acknowledging her authority, and to claim of the State governments some mode of distinguishing the Doctor of Medicine from the pretender and the charlatan. I know of no plan by which this can be effected other than by a law in each State establishing a Board of Medical Examiners, to whom shall be confided the exclusive power to grant the license to practise within her limits. It should be required to subject each candidate to a rigid examination, and forbidden to grant its certificate to any applicant who was found to be imperfectly qualified. The Board should be unconnected with any school of medicine: but no candidate should be admitted to examination, excepting regular graduates of some respectable institution, nor should even the diploma be recognized, unless it was conferred by a school teaching a full curriculum, and demanding terms of study of sufficient duration to authorize the belief that the diploma emanated from a worthy source, and was bestowed on a worthy recipient. The beneficial effects of a law so framed would be threefold. It would establish a marked line of distinction between the regular and the counterfeit physician: it would make the reputation and prosperity of a school dependent on the proficiency of its pupils: and it would teach the pupil to understand that his permission to practise depended on his attainments, and not exclusively on his diploma. A fair and honourable competition would be created among medical institutions. They would graduate only those who were really fully instructed: because that institution, whose pupils were frequently rejected as incompetent by the examining board, would be deserted in favour of those whose teachings were more perfect. The diploma would be of no practical value, unless ratified by the licensing board, and the inducement to grant it unworthily would not only be annulled, but every untrue certificate of qualification would be positively injurious to the reputation of the institution from which it emanated. As the diploma, moreover, would be of no value to the student unless deservedly conferred, it would be earnestly sought only as the necessary prelude to his ultimate object, the license to practise: and the same motive would induce him to matriculate in that school which would offer him the fullest instruction, not the easiest access to the degree of M. D. An examining board, therefore, in each State, demanding the diploma, would exert a salutary influence on the schools as well as the pupils, and its license would be to the public a certificate that the recipient was a worthy graduate in medicine, was qualified to practise his profession, and was, in truth, what he professed to be, a Doctor of Medicine in its pure and ancient signification. I am aware of the many difficulties which oppose the success of this measure. If it be deemed impracticable, I trust that some other more feasible and equal to the emergency, will be suggested. Deeply impressed with the magnitude of the evil, I beg leave to call the attention of the Association to the subject, and if it be considered expedient to invoke State-

legislation, to propose that a committee be appointed to investigate it, to report some efficient plan, and to draft a bill for the purpose, that the laws of the several States may be as uniform as possible."

A handsome tribute to the memory of "the philosophic DRAKE, and the eminent and learned HORNER," concludes the address.

We have already referred to this discourse. The high opinion which we formed after listening to it, has only been strengthened by carefully perusing it in a printed form. It is every way worthy of the author and of the occasion; although it is superfluous, we cannot refrain from adding our slight tribute of praise and admiration to the encomiums which have already been lavished upon it by the profession.

THE FOLLOWING BOOKS HAVE BEEN RECEIVED.

A Practical Treatise on the Diseases of Children. By J. Forsyth Meigs, M. D. Second edition, revised and enlarged. Octavo, pp. 711. Philadelphia. 1853. Lindsay and Blakiston. (From the publishers.) [*This work will be noticed in the next number of the Journal.*]

Traité des Maladies des Cuir Chevelu, suivi des Conseils hygièniques sur les soins à donner à la chevelure. Par le Docteur P. L. Cazenave. Avec huit planches. Paris. J. B. Baillière. (From the publisher.)

Materia Medica or Pharmacology and Therapeutics. By William Tully, M. D. Published in monthly parts by Jefferson Church, M. D. Springfield, Massachusetts. Vol. I., No. VII. (From the publisher. In exchange.)

The Medical Chronicle, or Montreal Monthly Journal of Medicine and Surgery. Edited by Drs. Dwight and MacCallum. Vol. I., Nos. 1, 2, 3. (In exchange.)

The Southern Literary Messenger. John R. Thompson, Editor. Richmond. Published by Macfarlane, Fergusson and Co. Vol. XIX., Nos. 7, 8. (In exchange.)

Class Book of Botany. By J. H. Balfour, M. D., F. R. S. E. With upwards of 1000 illustrations. Edinburgh. A. & C. Black. Part I. 8vo., pp. 357. (From Mr. West.)

Dr. C. J. B. Williams and others on the Principles of the Water Cure. By J. Timberlake. Pamphlet. 12mo., pp. 129. J. W. Randolph. Richmond. 1853. (From the publisher.)

Traité Clinique des Maladies des yeux. Par le Docteur F. S. Tavignot. Paris. Leclerc. (From H. Baillière.)

The Practice of Surgery. By James Miller, F. R. S. E. Third American, from the second Edinburgh edition. Edited with additions, by F. W. Sargent, M. D. Illustrated by three hundred and nineteen wood cuts. 8vo., pp. 720. Philadelphia. Blanchard and Lea. 1853. (From the publishers.)

The Peninsular Journal of Medicine and the Collateral Sciences. Edited by E. Andrews, M. D. Ann Harbor, Michigan. Vol. I., No. 2. (In exchange.)

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